The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 391. --Vol. XIII.] LONDON: SATURDAY, FEBRUARY 18, 1843. [Price 6d.

TO BE SOLD, BY AUCTION, on Tuesday, the 21st February instant, at the Castle Inn, Neath, Glamorganshire, at Twelve o'clock at noon, by Mr. WHITTINGTON, in two or more lots, ONE THOUSAND SHARES, of £25 each, in the CAMBRIAN IRON AND SPELTER COMPANY, whose works are at Maesteg, and whereon a sum of £20 9s. 10d. per share has been paid. Also the REVERSIONARY INTEREST in FIVE DEEDS POLL of the SWANSEA HARBOUR COMMISSIONERS for £2800, payable on the death of a lady of advanced age.—For further particulars apply to Messrs. Tilson and Squarey, solicitors, Coleman-street, London; or to the Auctioneer, Post-office, Neath.

TO MINERS AND OTHERS.—THE WHITE GRIT LEAD MINES, and SMELTING-HOUSES and COLLIERY, at Pontesford and Pontesbury, near Shrewsbury, TO BE SOLD, BY AUCTION, by Mr. TISDALE, on the premises, at the above mines, on Thursday, the 9th day of March, and following days.

AT THE WHITE GRIT LEAD MINES, &c.

A powerful STEAM-ENGINE, 37-horse power, at the White Grit Lead Mines, with boiler; about 120 yards of 16-inch pumps, rods, windbore, cistern, and rods, complete; capstan and rope, shearhead, balance bobs, gin, and ropes, all complete.—Also a powerful ENGINE, 60-horse power, erected at the Gravels, with boiler, pumps, rods, shearhead, capstan, and gin, complete.—Likewise another ENGINE, at the Batholes (nearly new), 14-horse power, upon the most improved principle, with boiler, 9-inch pumps, rods, bobs, pulleys &c., complete. The various gins upon the different shafts, with ropes, pit-heads, capstans, and pumps.—Several hundred yards of pumps, different sizes; many hundred yards of wrought and cast iron rails, flat and round rods, air-troughs, timber, iron, miner's tools and chests, fittings up of blacksmiths' and carpenters' shops, with all the necessary implements, and other appurtenances requisite for carrying on an extensive mining establishment.

AT PONTESFORD SMELT-WORKS.

THREE SMELTING FURNACES, in good condition, smelting iron, and all the necessary smelting tools, weighing machines, and frames, lead moulds, &c.—Also an excellent 4-horse POWER ENGINE, with blowing apparatus, slagheartha, weighing machines, &c.—An excellent CARRIAGE WEIGHING MACHINE, upon an improved construction; lead and cast-iron pumps, with several hundred yards of 2-inch lead pipe, a quantity of iron, wheelbarrows, with the fittings-up of blacksmith's shop, lathe, washing tools, &c.

AT PONTESBURY COLLIERY.

A capital STEAM-ENGINE, 9-horse power, with boiler, pumps, and rods, complete; shearhead, gin, and ropes; also two other gins and ropes, pit-heads, kibbles, baskets, and every requisite for a working colliery; together with the fittings-up of a blacksmith's shop, about 5000 bricks, and sundry other effects.

*** Sale to commence each day at Eleven o'clock punctually.

FOREST OF DEAN.—FREEHOLD COAL MINES for SALE, offering an opportunity for investment of money in a mineral property of extent and intrinsic value, rarely submitted to public competition.—In the month of May next, will be OFFERED for SALE, BY PUBLIC AUCTION, at the Auction Mart, in London (unless previously disposed of by private contract, of which due notice will be given), all those extensive and valuable COLLIERIES, or COAL MINES, situate in the Forest of Dean, in the county of Gloucester, called, or commonly known, by the names of—

PARK END ROYAL,	IVY MOOR HEAD,
PARK END MAIN,	WHITE LEYS, and
BROOK HALL DITCHES,	BIRCHES WELL,

together with all levels, cuts, water-courses, pits, and shafts, and also all roads, tramroads, and railways, steam engines, and machinery, and all works and implements of mining and of manufacture, in, upon, and about the same collieries, or coal mines, levels, and premises.

These collieries, which are now in active work, are situated almost close to the main line of the Severn and Wye Railway, which gives a direct and easy conveyance to both those rivers, and the various canals and railways connected with them, and more particularly to the manufacturing district of Gloucestershire and the great markets of Gloucester, Cheltenham, Oxford, Bristol, Bridgewater, and Cork, where, from the very superior quality of the coal, the demand is rapidly increasing, while new railways are opening still greater prospects of trade.

Early in March an advertisement, containing a particular description of the above valuable property, will appear; and, after that time, plans, distinguishing the respective seams, or veins, of coal, and showing the quantities therein; and other particulars, may be obtained on application to Messrs. Pering, Minet, and Smith, solicitors, Lawrence Pountney-place, London; Messrs. Isaac Cooke and Sons, solicitors, Bristol; Messrs. James and Wintle, solicitors, Newnham; Mr. Paul, solicitor, Exeter; and Mr. Hiram Gething (the manager of the works), at Park End.

MAESTEG IRON WORKS AND MARGAM TIN PLATE WORKS, Glamorganshire.—These two important works, now in actual operation, will be OFFERED FOR SALE, BY AUCTION (unless in the mean time disposed of by private contract), in the month of February next. The Maesteg Works consist of TWO BLAST FURNACES, with STEAM-ENGINE, of 35-horse power, have an ample supply of IRON ORE and COAL, extending under 100 acres of land.—The Margam Tin Plate Works are adapted to the make of ten BOXED TIN PLATES per week; the water-power is considerable; the whole of the machinery in good working order. The present machinery is applicable also to the ROLLING of METALS of every description.

Full particulars, and due notice, will be given of the time and place of sale; meantime the works may be viewed, and any information respecting them obtained, on application to Mr. David Rowland, solicitor, White Lion-court, Cornhill, London, and Mr. William Llewellyn, solicitor, Neath.

FOR SALE, by PRIVATE CONTRACT, on the ROSEWALL- HILL MINE, one and a half mile from St. Ives, in Cornwall, THREE STEAM-ENGINES, all new only three years ago; No. 1, a 36-inch cylinder PUMPING ENGINE, 8-feet stroke in the cylinder and 7-feet in the pump, with all wood work complete, including doors and windows and first piece of connection rod; No. 2, a STAMPING ENGINE, on Sims's combined cylinder principle—4-horse power. The consumption of coals with this engine never exceeded 7½ lbs. per horse power per hour; No. 3, a WINDING-ENGINE, 20-inch, double power, Boulton and Watt engine—6-feet stroke, with winding apparatus (iron) complete. The boilers of these engines are on the most modern construction, made of the best material and workmanship; are only one and a half mile from a good shipping port, and may be had very cheap.—Application to be made to Mr. Nicholas Trenhaile, of Camborne, to Mr. James Sims, engineer, at Redruth; or to Mr. English, 26, Fleet-street, London.

Redruth, Dec. 5.

WANTED TO PURCHASE, a GOOD SECOND-HAND PORTABLE STEAM-ENGINE, from 20 to 26 in. diameter of cylinder, from 4 to 5 feet stroke, with fly wheel, and if with winding apparatus it will be preferred.—Apply to J. Ormiston, at Flint, with particulars and price, delivered on board at the most convenient port, or delivered in the port of Flint.

TO ADVENTURERS.—TO BE LET, in the VALE of GLEN- MALUR, county Wicklow, a MOUNTAIN, on which there are TWO SEVERAL VEINS OF LEAD, presenting highly favourable prospects to speculators. There is at present a lead mine, working with great success, about a mile from the spot, and there is a road direct to the mountain.—Parties here may be had by applying to Messrs. Frost and Forster, New-square, Lincoln's Inn, London; Messrs. Brassington and Cole, 4, Bachelor's walk, Dublin; Messrs. Smith and Roberts, Truro; or of Mr. Hiram Dawes, Pilton, Barnstaple, Devon.

N.B.—This advertisement will only appear twice.—Dated Feb. 9.

TO COAL AND IRONMASTERS.—TO BE LET (with im- mediate possession), ON ROYALTY, all the MINES of COAL and IRONSTONE in the GREEN LANES COLLIERY, with or without the occupation of the Farm, consisting of fifty acres of land, situated at the Birches, near Walsall, in the county of Stafford. The mines that remain to be got consist of about twenty acres of yard coal, fifty acres of four-feet coal, fifty acres of bottom coal, and a quantity of the brown stone. About forty acres of the new mine ironstone. The whole of the bells, lower pebbles, and blue flats, remain to be got. Several pit shafts are already sunk on the estate, some of which are getting the yard coal, and others which may be put to get any reasonable quantity of coal or ironstone at a moderate expense.—A railway has been laid down by the Birmingham Canal Company from the colliery to a basin at the lower level of the Birmingham Canal, and the Birmingham and Essington Canal passes through the upper part of the estate, so that the produce of the mines may be brought to a good market at slight expense. There are engines and other machinery on the ground, to be taken at a valuation.

For particulars apply to Messrs. Byrom and Flavell, solicitors, 11, Bedford-row, London; to Mr. John Swaine, on the premises; or to Mr. John Hartland, Trillwood, Tipton.

ANTHRACITE COLLIERY, Pembrokeshire.—TO BE SOLD, BY PRIVATE CONTRACT, all those old established, lucrative, and valuable works, known as the KILGETTY COLLIERY, in the county of Pembroke, with powerful and excellent MACHINERY, comprising a large extent of the BEST ANTHRACITE COAL in the United Kingdom, and held by leases for the currence of two young lives.—The works may be inspected, by order, from Messrs. Bartlett, Hurd, Longbourne, and Victoreen, Grey's Inn, London; Messrs. William Brough and Son, mineral surveyors, Neath, Glamorganshire; or Mr. E. W. Jones, Longlow, Glamorganshire, who will give particulars, and are authorised to treat for the sale.

TO MINING ADVENTURERS AND OTHERS.—Important SAVING of FIFTY PER CENT. in the ARTICLE OF GREASE.—JOSEPH PERCIVAL, of Green-street, Wellington-street, Blackfriars-road, London, begs respectfully to inform the MINING INTEREST, that he MANUFACTURES an IMPROVED PATENT ANTI-FRICTION GREASE, for whims, train waggons, railways, and all purposes for which oil and grease are now used. A sample will be forwarded free, on application as above.

TO MINERS AND IMPORTERS OF ORE.—In order to obviate the disadvantages which importers of ore into Liverpool have hitherto lain under, owing to the want of any suitable premises for the depositing, preparing for sale, and sampling ore, the UNDERSIGNED, in conjunction with others, have ENCLOSED A SPACIOUS YARD, contiguous to the HARRINGTON DOCK, into which CARGOES MAY BE LANDED, direct from the vessel, WITHOUT CARTAGE; and have ERECTED there, POWERFUL MACHINERY for CRUSHING and SIFTING COPPER ORE, and PULVERISING SILVER ORE. All requisite facilities are also provided for SAMPLING and SELLING both descriptions, and importers are invited to avail themselves of the advantages which are thus offered them.—Terms may be known on application to TODD, NAYLOR, & CO.

Liverpool, Feb. 15. BROWNELLS & CO.

CARBONATE OF BARYTES WANTED.—Address, with lowest terms per ton, and where delivered, to Griffith Hughes, druggist, Thornbury, near Bristol.

LEAD MINES.—TO BE LET, for a term of years, with immediate possession, the well-known HURST LEAD MINE, in the North Riding of Yorkshire. The Hurst Mines form an important portion of the celebrated mining district of Swaledale and Arkendale. The veins are a continuation of those of the A. D. and C. B. Mines, and are now in full work. The average produce, during the last sixteen years, has been 6000 pigs per annum, or an aggregate of 96,000. The iron, wood, and implements may be taken at a fair valuation.

Further particulars may be known on application to Francis Morley, Esq., Marrick-park; John Harland, Esq., Marrick; or Mr. Thomas Blenkiron, the agent at the mine.

FOR SALE, TWO ONE-HUNDREDTH SHARES in the GOGERDDAN MINES, comprising the Bog Mine, Darren, and Cwmsymlog, the celebrated mine from which Sir Hugh Middleton made immense profits. The present workings have just reached about ten fathoms under the old mine, which is very extensive, and promise is held out of immediate profits.—Application to Mr. English, 26, Fleet-street, London.

SHARES IN CORNISH AND OTHER MINES BOUGHT, SOLD, or EXCHANGED, on COMMISSION; Mines inspected by first-rate practical miners; specimens of the ores of the various mines to be seen, and every information given, on application to William Treneery, jun. (from Redruth, Cornwall), at his offices, 5a, Threadneedle-street, London.

N.B.—A quantity of Black Jack for Sale.

MR. HENRY ENGLISH, at the suggestion of several friends interested in Mining Operations, having determined on taking upon himself the business of MINERAL SURVEYOR and ESTATE AGENT, will be happy to undertake the survey of any Mineral Property, or negotiations for purchase or disposal of the same.

Mr. English has availed himself of the services of experienced agents of high repute in Cornwall, North and South Wales, and Ireland, as also in the North, with the view to the examination of mines and collieries, and reporting thereon, to whom surveys may be confidently submitted, and their opinions taken on the several adventures.

Mr English is authorised to PURCHASE ONE or MORE TREWAVAS SHARES; also ONE SHARE in the TRETHELLAN MINE; as also to DISPOSE of TWO SHARES in the GOGERDDAN MINES.

VALUABLE WATERSIDE PROPERTY,

for wharfage purposes, in the vicinity of Greenwich, on the Kentish side, to be DISPOSED OF, BY LEASE, or otherwise, in lots or parcels.—Particulars, with terms, on application to Mr. H. English.

ORDERS RECEIVED FOR

ANDREW SMITH'S PATENT WIRE ROPE.
BORRADAILE'S PATENT FELT.
BICKFORD, SMITH, AND DAVEY'S PATENT SAFETY FUSE.
MARGARY'S PATENT (SULPHATE OF COPPER) FOR PRESERVATION OF TIMBER IN MINES, AND ON RAILWAYS.

CONSOLIDATED COPPER MINES OF COBRE ASSO- CIATION.—Notice is hereby given, that a SPECIAL GENERAL MEETING of proprietors will be held at the office of the association, 26, Austinfriars, on Monday, the 27th day of February inst., at One o'clock precisely, for the purpose of ELECTING an additional DIRECTOR, in pursuance of the unanimous recommendation of the board of directors.

By order of the court of directors,
26, Austinfriars, Feb. 8. W. LECKIE, Secretary.

TRELEIGH CONSOLIDATED MINING COMPANY.—The directors of this company hereby give notice, that, in accordance with the power vested in them by the conditions endorsed on the certificate, confirmed by the unanimous vote of the last annual general meeting, they have resolved to RE-ISSUE SEVEN HUNDRED AND TEN FORFEITED SHARES, to be distributed among the present shareholders (in the proportion of one share for every six now held), at the rate of 1l. 6s. per share. Those proprietors who may be desirous of taking up their quota must signify their intention, at the office of the company, as under, on or before the 24th of February instant. And notice is hereby given, that the distribution will take place from Monday, the 27th instant, to Saturday, the 4th of March next (upon payment of the said sum of 1l. 6s. per share), after which all shares unappropriated will be disposed of as the directors may determine.

By order of the board,
23, Throgmorton-street, Feb. 6. ROWLAND NICHOLSON, Sec.

UNITED MEXICAN MINING ASSOCIATION.—Notice is hereby given, that a THIRD PAYMENT, and being at the rate of 25 per cent., or TWENTY-FIVE SHILLINGS per share, in respect of the New Shares (or Red Scrip), amounting to £61,750, raised under the resolutions of the General Meeting of proprietors, held on the 18th October, 1841, will be made at the office of the association, on and after Monday next, the 13th inst., and which payment will complete 75 per cent. repaid on those shares. By order of a court of directors,

24, Old Broad-street, London, Feb. 8. JOHN MATHER, Secretary.

The scrip issued by the association for the above shares must be left at the office two clear days before payment can be made.

MEXICAN COMPANY.—The directors hereby give notice, that the SHARES, numbered as below, on which the call of 10s. per share, made on the 30th of November last, payable on the 31st of December last, has not been paid, have become FORFEITED by such default, and have been relinquished for the benefit of the other proprietors, without prejudice, however, to the right of the directors to enforce the payment of the said calls, pursuant to the 40th, 41st, and 69th clauses of the Deed of Constitution of the company.

By order of the court of directors,
32, Great Winchester-street, Feb. 15. J. M. MAUDE, Secretary.

The numbers of the forfeited shares above referred to are as follows—viz.: 1 to 180, 19-4 to 19-6, 20, 9 to 2700, 2214 to 2250, 2260 to 2280, 2289 to 2400, 2561 to 2650, 2849 to 2950, 3029 to 3033, 3064 to 3066, 3400 to 3433, 3641 and 3642, 6474 to 6500, 7207 to 7670, both numbers inclusive with all the intermediate numbers of each series inclusive, constituting a total of 892—say, 900 shares.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting this very hazardous operation. From many testimonials to its confidence with which the Manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.G.S., &c., &c.:—

"I am very glad to hear that my recommendations have been of any service to you. They have been given from a thorough knowledge of the great usefulness of the Safety Fuse, and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall.

THE THAMES TUNNEL IS OPEN TO VISITORS DAILY, Sunday excepted, from Nine in the morning until Six at night, and is brilliantly lighted with gas. Admittance, 1s. each. The entrance, for the present, is only on the Middlesex side of the River, and near the Tunnel Pier, at Wapping.

By order of the board of directors,
J. CHASLIER, Clerk of the Company.

Company's Office, 1, Wellington-buildings, City, February, 1843.

N.B. Steam-boats to the Tunnel Pier at Wapping, from Hungerford, Adelphi, Pennie Bar, Hungerford Bridge, Old Swan, Old Swan, and Adelaide Place, London Bridge, at every hour.

IMPORTANT PATENT IMPROVEMENT IN CHRONO- METERS and WATCHES.—E. J. DENT, 82, STRAND, who obtained the high satisfaction of receiving the Government Reward for the unparalleled performance of the last chronometer ever submitted to twenty months' public trial, begs to acquaint the public that the MANUFACTURE of his WATCHES, CHRONOMETERS, and CLOCKS, is SECURED to him by THREE SEPARATE PATENTS, respectively granted in 1831, 1836, and 1842.—Silver Lever Watches, precised in four holes, £6 6s. each; in gold cases from £9 to £10 10s.—Gold Horizontal Watches, with gold dials, from £9 9s. to £12 12s. each.—Dent's "Appendix" to his several Works on "Time-keepers," is now ready for circulation.

ANTHRACITE IRON.—CRANE'S PATENT.— TERMS FOR LICENSES FOR SMELTING IRON,

BY THE COMBINATION OF ANTHRACITE AND HEATED AIR, MAY BE HAD BY APPLICATION TO THE SOLICITORS OF THE PATENTEE, MESSRS. WATKINS AND HOOPER, 11, BACKVILLE-STREET, LONDON.

By the use of this process, it is believed that the whole of the veins of anthracite in the South Wales Basin, amounting in the aggregate to 514 feet in thickness, are applicable to the purpose; all those above, and including the brass vein being nearly 40 feet of the whole, have been successfully used by the patentee, at the Ynis-edwyn Iron Works, near Swansea.

The consumption of anthracite in the smelting process, has varied from 27 to 34 cwt. per ton of iron, according to the vein in use.

To heat the blast, the average consumption has been from 7 to 9 cwt of inferior coal and culm.

With respect to the strength of HOT-BLAST Anthracite Iron, the public are referred to the short-hand writer's report of the evidence given on the trial in the Common Pleas, Feb. 11, 1843, in the cause, "Crane v. Price."

Folio 32.—Mr. David Mushet deposed, that he had taken a similar series of bars to those described and made use of by Mr. Tredgold, for which see his work upon the subject; the same sized bars of remelted COLD-BLAST CAST-IRON, which would only support 573 lbs., required 2084 lbs. to break them, when cast with remelted HOT-BLAST ANTHRACITE IRON.

Folios 77 and 78.—Mr. George Cottam stated in his evidence, that, with bars four feet between the supports, and one inch square, the following had been the result of his experiments:—

Remelted COLD-BLAST IRON broke at 440 lbs. to 443 lbs.

Remelted HOT-BLAST ANTHRACITE IRON broke at 599 lbs.

Vide Mr. G. Cottam's evidence likewise with respect to the extraordinary ductility of hot-blast anthracite iron, in the same document.

The last experiment tried at the Ynisedwyn Iron-Works, which was in October of the present year, with 1-inch bars, 4 ft. 6 in. betwixt the supports, cast directly from the hot-blast anthracite furnace No. 1, gave the following breaking weights—Lbs. 682, 710, 634, 697, 646, 737, 630, 657—mean, 6714 lbs.

Ynisedwyn Iron-Works,
Swansea Valley, November 24, 1842.

ALLIANCE GAS COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the proprietors of the Alliance Gas Company will be held at the company's office, 39, Finsbury-circus, London, on Friday, the 3d day of March next, at Two o'clock precisely, when two directors will be elected, in lieu of two, who retire by rotation, but who are re-eligible.

By order of the board,
39, Finsbury-circus, London, Feb. 15. J. B. GREAVES.

THE GAS METER QUESTION.—No. 1016 (28th January) of the MECHANICS' MAGAZINE, contains Review of Flower's Pamphlet, and No. 1017 (4th February) Reply of Mr. Flower, with Review Supplementary; also full Report of the last experiments at the Adelaide Gallery, with Editorial Remarks. "Mechanics' Magazine" and Patent Office, 166, Fleet-street.

STEAM TO CORK, calling at PLYMOUTH and FALMOUTH. —The ST. GEORGE STEAM-PACKET COMPANY'S splendid and powerful steam-ship *HERCULES*, 600 tons and 220-horse power, Capt. S. S. MOULE, will SAIL FROM OFF ST. KATHARINE'S DOCKS, for the ABOVE PORTS, on SATURDAY, the 25th inst., at EIGHT O'CLOCK in the morning.—Further particulars afforded on application at the Special Eagle, Regent Circus, Piccadilly; 66, Haymarket; or at the Steam-Packet Office, 127, Leadenhall-street.

*** All heavy goods for shipment to be sent to the St. George Steam Wharf, Lower East Smithfield.

THE "HINDOSTAN" STEAM-SHIP AND H.M. FRIGATE "PENELOPE."—The two above-named grand steam-ships are natively fitted with ANDREW SMITH'S PATENT WIRE ROPE for their Standing Rigging; thus demonstrating that practical experience is daily and progressively establishing its superiority over all other Standing Rigging. For all mining and other purposes it is already proved to be the best and most serviceable description of rope, superseding hemp and chain.—For further particulars, address Mr. Andrew Smith, 2, White Lion-court, Cornhill, London.

LONDON STEAM-POWER MILL.—STEAM-POWER, from one horse upwards, with small or large workshops, may be RENTED, on terms worth the attention of manufacturers generally, patentees, or experimentalists. The premises are near the City; warmed by steam and lighted with gas.—Engines of 100-horse power are in daily operation, and regular speed may be secured.—Apply to Mr. Medwin, engineer, Mansfield-street, Borough-road, Southwark.

WHARF.—TO BE LET, and possession to be had at Lady- day next, very DESIRABLE PREMISES, now in the occupation of Messrs. Baddeley and Margrave, situate in WENLOCK-ROAD, City-road, and adjoining the London Zinc-Mills; consisting of a WHARF, having a FRONTAGE to the REGENT'S-CANAL and to the WENLOCK-BASIN, with a powerful CRANE for landing goods, and a LARGE SHED, all in thorough repair.—For further particulars and terms apply at the London Zinc-Mills, or at the office, 58, Martin's-lane, Cannon-street, or of Mr. W. M. Higgins, 34, Walbrook.

WOOD PAVEMENT.—THE PATENT STEREO-PRISM COMBINATION FOR WOOD PAVEMENTS, RAILROAD and OTHER VIADUCTS, CHURCH AISLES, PUBLIC HALLS, BARN and KITCHEN FLOORS, COURT-YARDS, STABLES, &c.—The undersigned patentee is desirous of GRANTING LICENCES to such parties as may require to use the above Combination for the purpose of wood paving, &c., at a distance of not less than six miles from St. Paul's Cathedral. A specimen was laid down at the west end of Lombard-street, by St. Mary Woolnoth's Church, in November last, for the Hon. Commissioners of Sewers of the City of London, and many scientific and practical men to whom the properties of this combination have been submitted, consider it to possess more strength, with greater elasticity and less noise, than any other wood pavement at present in use.

Further information may be obtained, and models seen, at the office, 5, Bloomsbury-place, at the National Benevolent Institution, Southampton-row, Bloomsbury, between the hours of Eleven and One o'c.m.; at the Polytechnic Institution; and at the office of the *Mining Journal*.—All letters to be pre-paid.

January 16. THOMAS JOHN DAVIS.

PATENT PERRYIAN PENS.—Prices rendered accessible to all writers.—JAMES PERRY and CO., manufacturers to Her Majesty and H.R.H. Prince Albert, have just introduced a new variety of their celebrated METALLIC PENS, in boxes containing one gross, &c., in cases containing a quarter of a hundred, and on cards; all of which are manufactured, under the protection of their patents, suitable for every description of writing, and superior to all the ordinary steel pens in general use. J. P. & Co. strongly recommend bankers, merchants, capitalists of metallic pens, and all large buyers, to make trial of these articles; in the full confidence that they will be found to possess more of the necessary elasticity for the production of good writing than any other pens at a similar price.

PENS, IN BOXES AND ON CARDS.—DOUBLE PATENT LARGE BARREL PENS, in boxes containing one dozen, with holder, or in boxes of three dozens each, four or medium points; and on cards containing nine pens with holder.

DOUBLE PATENT SMALL BARREL PENS, in boxes containing one dozen, with holder, or in boxes of three dozens, six dozens, or twelve dozens each, with fine or medium points; and on cards containing nine pens, with holder.

DOUBLE PATENT PENS, No. 3, in boxes containing three dozens, six dozens, or twelve dozens, each, with fine, medium, or extra fine points.

CURVE-CUT PENS, in boxes containing three dozens, six dozens, or twelve dozens each, with fine or medium points; and on cards containing nine pens, with holder.

PENS, in CASES containing a Quarter Hundred, with Holder.

DOUBLE PATENT PENS	No. 1,	with fine or medium points.
RAVEN BLACK PENS	No. 2,	" "
RAGGED PENS	No. 3,	" "

All the other sorts of the Perrynian Pens, manufactured by James Perry and Co., are sold as usual.—Sold by all stationers and dealers in metallic pens, and at the manufactory, 37, Red Lion-square, London.

COMPOSITIONS FOR WRITING WITH STEEL PENS. STEPHENSON'S WRITING FLUIDS.

These compositions, which have so remarkably extended the use of the Steel Pen, are brought to very great perfection, being more easy to write with, more durable, and in every respect preferable to the ordinary ink. By warm climates they have become essential. They consist of a blue fluid, changing into an intense black colour; a patent indelible ink; fluid, resembling wine; a superior black ink of the common character, but more fluid; a brilliant carmine red, for occasional writing; a carbonaceous record ink, unchangeable by any chemical agent. Also a new kind of marking ink, for linen; and ink-cases, adapted for preserving ink from evaporation and dust.—N.B. Black ink and inclosures of the above articles are occasionally being encountered as "new discoveries," but, on examination, they will be found to have only some new name.—Prepared by Henry Stephens, the inventor, 58, Shoreditch-street, Shoreditch-road, London; and sold by all stationers and booksellers. Also Stephens's select Steel Pens.

LAW INTELLIGENCE.

BRITISH IRON COMPANY—IMPORTANT JUDGMENT.

COURT OF QUEEN'S BENCH—FEB. 11.

SMITH v. GOLDSWORTHY.—Lord DENMAN: This is an action of covenant, brought by the plaintiff, as secretary to the British Iron Company, against the defendant, a member of the company, for calls. The company's original Deed of Settlement was dated 28th April, 1825, and by it the subscribers covenanted with Edmund Taylor, Robert Ogg, and William Martin, to pay such instalments on their shares as should be called for by the directors, in pursuance of the power vested in them. The defendant having become proprietor of many shares, executed an indenture, dated the 7th March, 1840, after the death of Robert Ogg, by which he covenanted with Edmund Taylor and William Martin to observe the covenants in the deed of 1825, and to pay all such instalments on the shares held by him as should be called for by the directors, in pursuance of the power vested in them by the Deed of Settlement. On the 3d July, 1840, an Act of Parliament was passed, which enacted that "all actions, suits, and other proceedings whatsoever, at law or in equity, for any injury or wrong done to any real or personal property of the said company, or upon, or in respect, of any present or future liability or liabilities to the said company, or upon any bonds, covenants, bills of exchange, promissory notes, contracts, or agreements, which already have been, or hereafter shall be, given or entered into, to or with the said company, or wherein the said company is or shall be interested"—" and generally all other proceedings whatsoever at law or in equity, to be commenced, instituted, or carried on by, or on behalf, of the said company, or wherein the said company is, or shall be, concerned or interested, against any person or persons, or body or bodies politic or corporate, or others, whether such person or persons, or any of such persons, or such body or bodies politic or corporate, or any member or members thereof respectively, is or are, or shall be, or shall have been, a proprietor or proprietors of the said company or not, shall and lawfully may be commenced, made, executed, instituted, presented, and prosecuted, or carried on, in the name of the person who shall be secretary of the said company at the time," &c. The action is brought under this clause. It is contended, on the part of the defendant, that the clause does not apply, because the covenant in question was entered into, not with the company, but with Taylor and Martin, and, therefore, the action should have been in their names. A similar objection was taken and overruled in the Court of Common Pleas, in the case of "Skinner v. Lambert," Easter Term, 1842, reported in the 20th volume of the *Law Journal*, page 237, except that the words of the Act of Parliament, in that case, were—" Any covenants which have been already entered into with the said company, or with any persons in trust for the said company, or with any person for the use of the said company," which words are not found in this company's Act, but the words, " or wherein the said company is or shall be interested," are certainly as large, and, according to a fair construction of them, appear to us to embrace the present case, more particularly as, according to the recent decision of " Stewart v. ———," in the Exchequer, in the sittings after last Michaelmas Term, whenever a company may sue by their public officer, they are bound to do.

It was further objected, that the declaration ought to have shown that a memorial of the names of the secretary and directors had been enrolled under the 11th and 12th sections, the latter of which forbids the bringing of any action under the Act until a memorial has been enrolled. There is no special demurrer on this ground. We do not say that the objection could have been sustained, even if there had been, but we think that it certainly cannot upon general demurrer, the declaration stating that the plaintiff is secretary, and sues as the nominal plaintiff, according to the Act of Parliament, on behalf of the company. The main objections, however, to the plaintiff's right to recover, were two—first, that the original number of directors, as fixed by the Deed of Settlement, had been reduced by successive resolutions of the company from sixteen to six; secondly, that the Deed of Settlement having provided that there should be 20,000 shares of 10*l*. each, those shares had been reduced by a resolution of the company to 5*l*. each, and again, by a subsequent resolution, raised as before to 10*l*. Both these alterations were contended to be such fundamental alterations in the constitution of the company, as were not warranted by the powers given by the Deed of Settlement, and amounted to a dissolution of the company, or, at all events, vitiated all their proceedings. The Deed of Settlement provides, by clause 29—" That, for the better conduct and management of the affairs of the company, it shall be lawful for a special general meeting, called for the purpose, from time to time to amend, alter, or annul, either wholly or in part, all or any of the clauses of this deed, or of the existing regulations and provisions of the company, and to make any new or other regulations or provisions in lieu thereof, or in addition thereto, and such new regulations and provisions, and such amendment, alteration, or annulment, if confirmed by a subsequent special general meeting, called for the purpose, at a distance of not less than two weeks, nor more than four weeks, from such preceding general meeting, shall in such case, but not till then, be binding and conclusive upon the proprietors, provided always that such amended or altered regulations and provisions do not extend to amend, alter, or annul, all or any part of the regulations and provisions established and settled by these presents, for confining the individual responsibility of each proprietor, as between himself or herself, and his or her co-proprietors, to the amount of his or her shares in the capital of the company for the time being." The resolutions in question were made under this clause, with the proper formalities, about which no question is raised, but it is contended by the defendant that they are not within the authority given by that clause. With regard to the number of directors, the deed also provides, in the commencement, " that the direction and management of the affairs of the company shall be confided to sixteen directors, to be chosen from among the proprietors in the manner hereinafter mentioned." And, by clause 102, it is provided that the directors of the company shall never consist of more or less than sixteen. It is argued, from this latter clause, that the number of sixteen directors was part of the constitution of the company, essential to its existence, and unalterable; that the 29th clause does not extend to it, or enable a special general meeting to make any change in it, but is confined to regulations for the conduct and management of the affairs of the company. Now, it is to be observed, that the Deed of Settlement, in terms, declares that the direction and management of the affairs of the company shall be confided to sixteen directors. If, therefore, the 29th clause ought to be confined in the manner argued, it will still be difficult to see how the number of the directors can be otherwise than a regulation for the conduct and management of the affairs of the company. It is true that the 102d clause is positive in its terms, that the number shall never be more or less than sixteen. But this must be construed with reference to the 29th clause, which gives absolute power of alteration in all cases to which it applies. Looking at the several clauses together, we are of opinion that it was competent to two special general meetings, properly convened, to alter the number of directors, and that the objection founded on that alteration, fails. This disposes of the 41st, 43d, 47th, 48th, 49th, 50th, 51st, and 52d pleas in favour of the plaintiff. These or four cases were referred to in that part of the argument, but they do not bear very strongly upon it. " Davis v. Hodgskiss," 3d Manle and Selwyn, page 436, was an alteration in the number of persons who were to conduct the business of a joint-stock brewery, made without any express power or authority, and contrary to the original provisions. Here there is an express power given. " Tyrrell v. Wardley," 1st Manning and Granger, page 909, was determined by the majority of the court on the construction of a power given to a committee of management, the words of which were very different from those used in the present case, and all the court agreed in another view of that case, which was decisive. The second objection, as to the alteration of the shares of the company, is of a more formidable description. The amount of the shares is properly part of the constitution of the company, and does not strictly depend upon any clause, regulation, or provision of the deed; the alteration of the shares, therefore, ought not to come within the meaning of the 29th clause. If it did, we should hardly consider that the proviso in that clause forbade the alteration, because the reduction of the value of the shares could not have the effect of rendering any proprietor liable, as between him and the other proprietors, beyond such reduced value, although it might, as was ingeniously argued, diminish the fund to which he had to look for indemnity, in the event of being sued by third persons for debts of the company.

Admitting, then, that the resolutions of 7th November, and 4th December, 1839, by which the shares were reduced, were not justifiable, the question will be, what consequences followed from them? On the part of the plaintiff, it is argued that they were simply void and wholly immaterial, and that the shares always remained in point of law 100*l*. shares, or if not, that any mischief which might arise from those resolutions, was cured by the subsequent resolutions of 8th May and 10th August, 1840, by which the value of the shares was restored, which resolutions are not cut to the replication to the 37th plea, and is to both which an issue is taken, whether those last resolutions were carried into effect with the concurrence of the defendant. It is further argued, for the plaintiff, that the Act of Parliament before referred to, 3d and 4th Victoria, Chapter 28, confirmed the resolutions existing at the time of its passing, and so set up those, which restored the shares to their original value. The defendant answers, and, we think, rightly, that the Act of Parliament, in speaking of the resolutions made in pursuance of powers contained in the Deed of Settlement, must be taken according to the case of the " Stanford Railway Company v. Stanford," 2d Barnewall and Adolphus, page 314, to refer only to resolutions legally made, and, instructed, that in the Act has the words—" And which resolutions have been conferred thereon (that is, on the Deed of Settlement) or originated therein," and the pleadings do not show the resolutions, now in question, to have been indorsed, or subjoined, that Act of Parliament cannot be resorted to by the plaintiff to support the resolutions. The defendant further answers that the effect of the resolutions reducing the shares, was to dissolve the company. We do not think any such effect followed, but rather that they were simply void and inoperative; neither does it lie, in the mouth of the defendant, who became a proprietor after those resolutions passed, to say that no company then existed. We think the shares always were, in point of law, 100*l*. shares, and, therefore, that the 37th and 40th pleas are no answer to the action. We, also, further think that if the shares were reduced at one time, to 5*l*., still that the resolutions of 1840 restored them to their original value, and that the concurrence of the defendant, in carrying those resolutions into effect, is a material question. Neither is it necessary to show that such concurrence was by deed, for it, in no way, alters the covenant of the defendant. That covenant binds him to observe the covenants on the Deed of Settlement, which deed provides for alterations to be made by resolutions not under seal, but to be passed at special general meetings, the resolutions themselves are not required to be by deed, nor can it be in any way requisite that the concurrence of the defendant in them should be by deed. For these reasons, we are of opinion that the plaintiff is entitled to the judgment of the Court.

MR. SAMUEL HALL'S PATENT CONDENSERS.

BAIL COURT—FEB. 11.

HALL v. HUTCHINSON AND PIM.—This case, which was partly heard on Friday (reported in our last), was resumed and concluded to-day. The plaintiff is the patentee of an improved steam condenser, by which the power of the engine can be increased without increasing the danger, and which produces other advantages of an important character in the efficiency and economy of the steam-engine. The defendants are two of the directors of the St. George Steam-Packet Company, who are the owners of a great many steam-vessels trading from this country to Ireland, the continent of Europe, and America; and the question between the parties in the action turned entirely upon the construction of an agreement as to the terms upon which the defendants were to be at liberty to apply to their vessels the patent machinery of the plaintiff. It was, in the first instance, agreed that the defendants should, in consideration of paying 1*l*. per horse-power per annum, have the enjoyment of the plaintiff's invention during the continuance of his patent in sixteen vessels, which were named in the contract, and that in certain events they were to have the power of substituting other vessels in the room of those expressly named in the bargain. They applied the new condenser to two only of the sixteen, but subsequently used the patent in the case of six other vessels, none of which were named in the original contract. It was in reference to these latter vessels that the present action was brought.

The SOLICITOR-GENERAL (with whom were Mr. Erle and Mr. Cowling) stated the plaintiff's case, and contended, that, as according to the original contract the defendants would be entitled to use the patent machinery in the six vessels in question for the remainder of the time during which the patent was to run, so the plaintiff had the right to receive 1*l*. per horse-power for every one of the six vessels, and for every year of that time, except in some contingencies, which it is unnecessary to mention.

Mr. KELLY (with whom were Mr. Knowles, Mr. Crompton, and Mr. Corry) appeared upon the part of the defendants, and, in answer to the case which had been made upon the part of the plaintiff, upon what may be called the first contract, set up a second one, which was to be deduced by inference from some correspondence which took place between the parties, and by which, according to the learned counsel, it was agreed between them that the defendants should be at liberty to apply the improved machinery to other vessels to the extent of the horse-power of the fourteen vessels to which the patent condensers were not applied. The learned counsel further contended, that supposing this view of the case not to be correct, he should insist that the utmost amount which the plaintiff could recover was that which resulted from calculating the amount of the horse-power of those six vessels, and the time for which the patent condensers had been used therein, with reference to the sum of 5*s*. per horse-power per year; as the plaintiff had allowed the Waterford Company to use his patent at that rate, and had originally contracted that if ever he reduced his terms to any other party, he would make the same reduction to the defendants.

The SOLICITOR-GENERAL, in reply, contended that there was no second contract at all, and that the correspondence had no effect upon the original bargain, and was not entered into with any reference to it. With regard to the proposed reduction of the terms upon which the calculation was to be made, the learned gentleman showed that the charge to the Waterford Company, all things being considered, was really higher than that which had been made to the defendants.

The learned JUDGE, having left the whole case to the jury, and expressed his own opinion to be in favour of the view taken by the Solicitor-General, the jury found a verdict for the plaintiff in general; finding, moreover, that the amount of the charges ought to be calculated upon the principle contended for upon the part of the case. It was, therefore, agreed that the particular amount for which the verdict was to be finally entered up, should be settled out of court.

LIABILITY OF SHAREHOLDERS—TRELEIGH CONSOLS.

VICE-WARDEN'S COURT, CORNWALL, FEB. 2.

PASCOE AND OTHERS v. TREHERNY.—This was an action brought by three plaintiffs, Pascoe, Hamby, and Morton, as tributers, against the defendant, as an adventurer in these mines, for the sum of 9*l*., being a balance remaining on a tribute account for a five week's take, commencing on the 24th June last, at 8*s*. in 1*l*. The chief question raised was as to the liability of the plaintiff, and witnesses were examined as to the proof of his being a shareholder in the undertaking; it was proved by Captain Sincock and others, that the defendant was often on the mine, expressing much interest in any improvements which took place, and complaining of his losses in the concern, and that he had been known to attend the meetings of adventurers in London. The " take" having been proved, and the quantity and value of the ore described, the VICE-WARDEN summed up, and the jury returned a verdict for the plaintiffs for the full amount. On the 6th inst. Mr. HENALLACK moved for a new trial, on the ground that there had been no evidence to prove the defendant a shareholder, and his HONOUR deferred the decision.

SPECULATION.—One of the most lamentable results of over speculation, in modern days, is that of Messrs. Wright's bankruptcy. From the uncertain and speculative character of the different properties, in which they so recklessly embarked, it is not possible to determine a sum that can represent their present value; but it is estimated that the property to be taken by the assignees, and stated in the balance-sheet, at the cost amount of 104,338*l*. 10*s*. 7*d*., may realise 54,406*l*. 8*s*.; and the property held by creditors, and stated at the cost of 143,943*l*. 4*s*. 7*d*., may realise 124,636*l*. 6*s*. This estimate, however, will be found most fallacious. The shares estimated by the bankrupt as of doubtful value, amounting to above 40,000*l*., have either been forfeited, or produced nothing, with only one exception, and on that, out of 2700*l*., there will be a loss of 2000*l*. Of those estimated as good, amounting to above 43,000*l*., mention may be made of some which have been forfeited, or produced nothing, or on which there has been a great loss:—Bristol Copper Mine mort., Bedford Mine ditto, Deal Pier Company 400*l*., General Mining Association, loss of 700*l*., German Mine, loss of about 3000*l*., Imperial Slate Company 1200*l*., London and Birmingham Alkali Company 2000*l*., New Brunswick Company 3000*l*., Oakwood Colliery 2700*l*., Patent Rotatory 1400*l*., Patent Invention Company, loss of above 500*l*., Patent Dye Extract 6000*l*., Rio Doce Company 2200*l*., Southampton Dock Company 1000*l*., Trevidgin Mine shares, loss of above 600*l*., trustees of *Mermaid* steamer 3200*l*.—thus making a total of 21,940*l*. This sum, added to the shares estimated as bad, makes a loss of above 60,000*l*. There are many others which still remain uncertain as to their productiveness. At the time of the bankruptcy, John Wright, the principal of the firm, was a shareholder in above sixty different companies, and, besides those taken by the assignees, there were shares and debentures in the hands of creditors of the cost of 64,611*l*. 7*s*. 11*d*., and in the hands of the bankers, shares, &c., of the cost of 36,327*l*. 10*s*.—making a further sum of 21,536*l*. 17*s*. 11*d*. A considerable portion of this money also is carried to losses.

EXTENSION OF THE APPLICATION OF IRON.—*(From a Correspondent.)*—As another instance of the increasing uses to which iron can be applied, we may mention that a large iron mansion has been built by Mr. W. Laycock, Oldhall street, Bloomingham, who has invented an entirely new plan in the application of iron for buildings; the house in question, which is made up of separate plates, is now erecting for public exhibition, previous to its shipment to Africa, where it is to be erected as a palace for one of the native kings. This novel fabric has three principal floors and an attic; the basement story is seven feet high, the second ten feet, and the third, in which are the state apartments, is twelve feet; the principal room of which, the presence chamber, is fifty feet by thirty, and ornamented in a style of magnificence rarely equalled. To prevent the consequence from heat in such a climate as Africa, a current of air is admitted between the outer casing and the panels inside, and which can be regulated at pleasure.

ROCK SALT A PREVENTIVE OF DRY-ROT.—The committee for the registry of shipping at Liverpool, in their address, state, they have no hesitation in saying that rock, or coarse grained salt, is a sure preventive from dry-rot, the river craft conveying salt from the interior of Cheshire to the port, after fifty years' service, are found as sound as when first built, while ships in her Majesty's docks, as well as merchant vessels, have been found unseaworthy, after three or six years, from their date of build. The late Mr. Bailey, of Ipswich, who in fifteen years built ships for the navy and merchant service, of which the tonnage amounted to 16,000 tons, every plank of which he boiled in salt water, and dry-rot never appeared in one of them. A preventive so easily obtained, particularly at Liverpool, is worthy of the most serious consideration.

INSTITUTION OF CIVIL ENGINEERS.

FEB. 14.—The PRESIDENT in the chair.—In the conversation which was renewed upon Mr. Pole's paper "On the Comparative Friction of Beam and Direct Action Steam-Engines," the author further explained the nature and objects of his paper, which had not been fully understood the former evening, and illustrated the mode of analytical reasoning by which he had arrived at his conclusions. He then proceeded to answer the objections which had been raised against the laws of friction adopted by him, and to comment upon the mode of experimenting of Vince and others, showing, on the other hand, by quotations from the recorded experiments of Amonton, Coulomb, Renaix, and Morin, and from the works of Gregory, Brewster, Emerson, Playfair, Barlow, Farey, De Pambour, Poisson, Pratt, Wherwell, and Moseley, that the views he had taken were correct. He also noticed the variations produced by attrition, and by the introduction of unctuous substances between the rubbing surfaces. These views, which were given at great length, and with much clearness, were corroborated by several members present, some of whom had been quoted as authorities, and the propositions involved in the paper appeared to be generally received.

A paper was read, describing a new mode of making malleable iron direct from the ore at one process; it is the invention of Mr. Clay, and is used at the Shirva Works, near Kirkintilloch, Scotland. By this process, a mixture of dry hematite, or other rich iron ore is ground up fine, with about fourteenths of its weight of small coal; this mixture is allowed to pass gradually through a hopper into an oven adjoining, and forming part of a species of puddling-furnace, into which a given quantity is drawn at stated times, when thoroughly and uniformly heated. The charge is then puddled in the usual manner, but with less labour than when working plate-iron, and in about an hour and a half, the iron is produced in a malleable state fit for shingling and rolling into bars. After another process of piling and rolling again, malleable iron bars are produced of a quality (as was stated by some members present) superior to the cable bolts or best iron, usually made by the long and expensive process of calcining the ore, smelting in the blast-furnace, and refining the pig-iron, and the saving of fuel is necessarily very great. The iron was stated also to be capable of being converted into steel of superior quality, and, when worked by Mr. Heath's plan, of uniting manganese in the process, cast-steel was produced, which possessed the power of welding, or uniting, to iron, and, in consequence, all the cutlery which was formerly made of shear-steel, was now made of cast-steel. The cast-iron produced from the scoriæ, or refuse slag, of this process, is of a better quality, in consequence of the absence of phosphoric acid, which is ordinarily present in the limestone, used as a flux in the blast-furnace. This paper was received with approbation by the members, who were impressed with its value, as offering a means of working the comparatively unopened mines of hematite of rich quality, existing in Lancashire, Devonshire, and Cornwall, all of which could be brought into use by this means, and if, as asserted, the iron made good steel, England would be rendered independent of Sweden, whence all the iron for converting into steel was now imported.

The papers announced to be read at the meeting of February 21st, were "Account of a Series of Experiments on the Comparative Strength of Solid and Hollow Axles," by J. O. York, A.I.C.E.—" Description of the American Engine, *Philadelphia*, used on the Birmingham and Gloucester Railway," by G. D. Bishopp.—" Description of Lieutenant D. Rankine's Spring Contractor, for Suiting the Action of the Spring of Railway Carriages to Variable Loads," by W. J. M. Rankine.

CAUSE, EFFECTS, AND PREVENTION OF SMOKE.

Mr. Edward Solly, jun., delivered a lecture on this subject to a very numerous auditory, at the Royal Institution lately, in which, after alluding to the importance of the subject, the lecturer stated, that although there were three forms of matter, the solid, fluid, and gaseous, but two of these were combustible. Although we consumed solid coal, fluid oil, and uniform gas, but two of these were really combustible, as it was only when the fluids were converted into gas that they would burn. Bituminous coal, or common fuel, was composed of two of these elementary principles, gas and the solid carbon, or coke, a knowledge of which was essential to the true philosophy of smoke. The object of combustion should be to put the carbon into the best form for combination with oxygen, as was shown in those arrangements for burning lights where solid carbon is constantly being given off, forming the outside of the flame. Some of the compounds of hydrogen contain so much carbon, which is held by so feeble an affinity, that no union with hydrogen takes place, and smoke is formed. Smoke is formed from two causes—first, when there is too much carbon and not enough oxygen; and, second, when the flame is cooled. It is not true, however, that smoke is formed only in combustion when there is not a sufficiency of oxygen, because it is also produced when there is not a sufficiency of heat. This is shown in the case of a common candle, which, when standing on the table, burns with a steady flame and without smoke; but when rapidly moved in the air, considerable smoke is formed, which is occasioned by the cooling of the surface. Now, the lecturer observed, see what takes place in a common furnace, we have, first, the carbon in a state of active incandescence, on which the hydro-carbon, or coal, is thrown; the door is then closed, and a sufficient quantity of oxygen not being introduced, smoke is rapidly evolved. Such is the case with the furnace; but it would also be impossible to devise a better means for the formation of smoke than in the common fire-place, backed as it is by earthy and metallic surfaces, where it is impossible to get oxygen through the solid particles. It is impossible for any one to say but that smoke is a nuisance, but its effects upon animals are more mechanical than chemical. The same is also the case with plants, as, if they are freely washed and deprived of the solid portions of carbon which adhere to them, much good may be done. A few years since there was a garden in the interior of Somerset-house, the plants of which grew to great perfection in the spring, which was done by their constant ablutions with water, by which they were kept constantly clean and free from the adhesion of blacks and dust, to which vegetation in the neighbourhood of towns chiefly owe their injury. Akin to blacks was house dust, chiefly resulting from soot, which the lecturer said were nearly alike in chemical composition, as the following analysis showed:—

	House dust.	Blacks.
Combustible matter	502	371
Salts of ammonia	143	436
——— potash and soda	29	24
Oxide of iron	126	50
Silica	144	65
Alumina	31	31
Sulphate of lime	28	31
Carbonate of magnesia	6	7
	1009	1009

Now, the greatest proportion of these were combustible, and if the fuel was properly burnt, none of these carbons would be wasted, and the nuisance of smoke would be prevented. In order to do away with the nuisance, various plans had been proposed during the last two centuries, which were more or less interesting. Amongst these were some in which the mechanical arrangements were the principal feature; and he might here mention, that one of the great causes of smoke was in the mode by which the stoker put on the fuel. If the coal were carefully put on, much good might be effected, but it was more convenient to the workmen to throw on a large quantity at once, by which smoke in very great abundance was given off. The most important of these was the patent furnace of Mr. John Jurkes, where there was no attendance required, nor shovelling on by stokers. The contrivance was an endless chain of fire-bar, forming the furnace, which were perpetually traversing, in the process the volatile particles being given off in the first stage, passing over the fuel in an active state of incandescence, by which the whole are burnt, and no smoke is formed. The fuel is contained in a hopper outside the fire door, resting on the fire-bars, from whence it is, by their traversing motion, carried onward until the whole is consumed, the ensrie, consisting merely of the incombustible part of the fuel, being thrown out at the other end. Thus, the furnace is constantly feeding with fuel, and rejecting the scoriæ, the fire-bars being free from the formation of clinker; and for the admission of air—the necessity of which, to ensure perfect combustion, was illustrated in a very interesting manner at the beginning of the lecture. The absence of smoke and perfect combustion implied a considerable saving in fuel, and the economy of the different plans, as stated by the different inventors, averaged from 15 to 30 per cent., but if even no more than the former were accomplished, it was important to the manufacturer as a saving. There is no doubt whatever, the lecturer further observed, that, on chemical grounds, smoke may be altogether done away with, and if we believe the testimony in favour of all the patents, all were good at their time, and continued so until superseded by fresh improvements. He hoped that, as the nature of smoke was so well known, and the means for its prevention had been discovered, public attention would be more generally drawn to the subject, and that some legislative measures would be adopted. There was a strong prejudice in favour of old plans, and it was not until an Act of Parliament was passed and brought into active operation that any good could be accomplished, so that parties should be compelled to find out the most suitable means for their own interest and remedying the evil.—[Amongst the specimens in the library was a model of the furnace above alluded to, which was explained by Mr. Jurkes, the inventor, to some of the most distinguished scientific men in the metropolis, who passed the highest encomiums on the simplicity and ingenuity of the invention, and their approbation of the numerous testimonials to its use.]

ALCOHOL.—An experiment has been made, at the Theatre of Montpelier of a new principle of lighting—from alcohol—said to be successful, and important to the vine-growing districts of France, as a fresh vent for their produce. The light is stated to be of dazzling brightness, and without either odour or smoke.

PROCEEDINGS OF PUBLIC COMPANIES.

IRISH WASTE LAND IMPROVEMENT SOCIETY.

The half yearly general meeting of this company was held at the King's Head Tavern, Poultry, on the 16th instant,

The Right Hon. the Earl of DEVON in the chair.

The advertisement convening the meeting having been read, the CHAIRMAN called upon the Secretary to read the reports—the insertion of which, owing to the delay in forwarding the copy to this office, we are obliged to postpone until next week.

The CHAIRMAN observed that the documents read were so detailed, that he could add no information to them, but should be glad to answer any questions that should be proposed by the proprietors. There, however, was one part of the directors' report upon which he wished to remark—viz., that which alluded to the forfeiture of the shares. At the last meeting above 500 shares were declared forfeited, out of 749 recommended to be forfeited by the directors. He, in conjunction with the rest of the committee, still believed that to forfeit those shares would be the best course which could be adopted. To have recourse to legal measures, would involve the company in great expenses, and would be of no avail after all. The forfeiture of these shares would certainly make any calls, that may be required, fall heavier on the remaining proprietors; but, as the property showed well for an early division of profits, the dividend, from there being a smaller number of shareholders, would, of course, be of a greater amount.—In reply to a proprietor, the CHAIRMAN stated that the balance of cash in hand amounted to 552*l.*—Mr. MAUDE read the statement of accounts, which lays at the office, for the inspection of the shareholders.—The CHAIRMAN stated that, in addition to the reduction which has taken place in the expenditure in Ireland, a similar one had been made in London.—The report was then received and adopted, and, after a little discussion, ordered to be printed and circulated.

In reply to a proprietor, the CHAIRMAN said, that the number of shareholders was about 135.—A letter was read from Mr. Featherstone, one of the first reclaimers of waste land in Ireland, which gave a very favourable account of the means now adopted by the Irish Waste Land Improvement Society; and Col. ROBINSON stated that Mr. Featherstone had said, as his opinion, that the new tariff would have but little effect upon the sale of cattle; but he recommended that the Scotch breed should be encouraged, as it was the better sort which would be least affected.

Messrs. Maude and Smith were unanimously re-elected directors of the company.—After some conversation (which was rather of a private, than a public, nature) upon the forfeiture of the shares, during which a strong wish seemed to prevail that Mr. O'Connell should be sued for the amount due by him, for calls—the parties holding the other shares being either dead or insolvent—it was resolved that 184 shares should be declared absolutely forfeited, the opinion of the committee being that it would be merely throwing away money to take any proceedings against the late Lord Mayor of Dublin.

The names of the parties in arrear upon the third call were then read, of which about 1500*l.* was expected to be recovered, and immediate proceedings were ordered to be taken against several of the parties, who could, but would not, pay. On this list were Messrs. Ald. Farncombe, Fitzsimon, W. O. Gore, Rev. G. Hudson, T. Lamie Murray, and many others, including three or four solicitors, all of whom are able to pay.

The directors were, after some discussion, empowered by the proprietors, in accordance with the Act of Parliament, to raise a sum, not exceeding 3000*l.*, by loan, upon the security of the company's estates. This loan will prevent another call being made, which, from the number of defaulters, had become necessary.

A PROPRIETOR begged to draw the attention of the meeting to a report that was abroad, that great partiality had been exercised in Ireland, to the Orange faction, in the letting of the land. He wished to know *if* it was true.

The CHAIRMAN denied that any such partiality existed.—Col. ROBINSON said that, on the contrary, the stewards were particularly directed not, on any account, to meddle with either politics or religion. Assistance had been requested by the Catholics, on one of the company's estates, towards building a chapel; he replied, that the company could do nothing in that way, but that privately he would assist the applicants. Accordingly, he set a subscription on foot, which was very liberally seconded by the directors and others. This was not like partiality.

The thanks of the proprietors were then unanimously voted to the noble chairman, and he having returned thanks, the meeting adjourned.

NORTHERN AND EASTERN RAILWAY COMPANY.

At an adjourned special meeting, held at the London Tavern, on Wednesday, the 13th inst., it was unanimously resolved to extend the line to Newport, and, subsequently, to Cambridge, to carry out which extension, the amount of the assumed cost (190,941*l.*) is to be raised by 13,208 shares, *at* 30*l.* each, which will realise 152,600*l.*, the surplus of the old fund, 40,191*l.*, being added, to make up the deficiency.

GREAT WESTERN RAILWAY COMPANY.

The half-yearly meeting of the shareholders of this company was held at the company's establishment, in Princes-street, Bank, on Thursday, the 16th inst.—Mr. SAUNDERS (the secretary) having read the advertisement convening the meeting, the CHAIRMAN (Charles Russell, Esq., M.P.) then observed, that it was a great pleasure for the directors to lay before the proprietors the report for the half-year, because they thought it exhibited every sign of prosperity in their undertaking, though, no doubt, they had suffered from the depression of trade which had pervaded every part of the kingdom. It would be seen that the returns of the past half-year exceeded those of the corresponding six months of 1841 in the ratio, as a greater extension of the line had taken place in that period, from which circumstance they were now able to give an advanced dividend at the rate of 7, instead of 6 per cent. With a view to make every saving which could be done with safety, and without affecting the interest of the company, it would be seen that the directors proposed to consolidate their establishments at Bristol and London—also, to concentrate all the works connected with locomotion at Swindon, and to remove the offices from their present locality to Paddington, and to dispose of the premises in Princes street, when they would set about a searching revision of their whole establishment, with a view to effect considerable reductions. In applying themselves to retrenchment in other quarters, the directors did not think that they themselves ought to be held harmless. By the resolution of August, 1841, it was determined by the proprietors that the board of directors should be reduced to eighteen, and by a subsequent resolution the number was determined on a still further reduction of their number to twelve, as vacancies might occur, by death or resignation, and it was now intended by the directors to carry into effect at once the object of the proprietors, as far as the amount was concerned, which they proposed to fix upon for the directors, by reducing the remuneration of the board to 1200*l.* per annum. The chairman then alluded to the great saving effected by a lower rate of interest, the total amount of which (from 5 to 4 per cent.) would be 4000*l.* per annum, and to the erroneous notion that had spread amongst some proprietors respecting the depreciation fund, which he considered of the most essential benefit to the company; and, in conclusion, urged upon the meeting the propriety of contributing towards the endowment of a church and schools for the children of the numerous servants of the company that would be located at Swindon, in relation to which he stated that their late benevolent director, Mr. Gibbs, had bequeathed a sum of 100*l.* towards a church, and the late deputy-chairman (Mr. Bright), who has resigned, had expressed a wish to subscribe 100*l.* towards the church, and 100*l.* towards the schools. He wished the contribution might be successful, as he considered the welfare of the servants of the company was deeply involved in the accomplishment of this object.—The SECRETARY (Mr. Saunders) then read the report, from which it appeared that the traffic for the six months had produced 358,604*l.* 0*s.* 9*d.*, of which 302,084*l.* was earned on the Great Western line. The number of passengers was 859,444, and the expenses of working were reduced to 38 per cent., exclusive of the sum written off for the renewal of stock. The disposable sum was 108,402*l.* 9*s.* 11*d.*, out of which the directors recommended a dividend of 3½ per cent. for the half-year to the 31st December, 1842. A balance of 2662*l.* 8*s.* 11*d.* would then remain. The petition for the Oxford branch had been presented to Parliament, and the Cheltenham Company had agreed to the amalgamation proposed by this company.—After some discussion on the depreciation fund, third-class fares, the proposed church and schools, and other subjects, in which Mr. James Heyworth, Mr. Cornthwaite, Mr. Fripp, Mr. Veasey, Mr. Bailey, and others took part, the report was adopted unanimously.—The following gentlemen were then re-elected directors:—Lord Barrington, M.P., W. G. Hayter, Esq., M.P., J. W. Miles, Esq., M.P., C. Russell, Esq., M.P., and H. Simonds, Esq., after which a vote of thanks was passed by acclamation to the directors, and also to the worthy chairman, who, after several contributions had been made to the building fund, the meeting separated.

CHELTENHAM AND GREAT WESTERN RAILWAY COMPANY.

A special meeting of the proprietors to this company, was held at Cirencester, on Tuesday, the 14th inst., to consider the propriety of authorising the directors to treat with the Great Western Company for the entire sale of their property, according to the proposal made in January last. Under present circumstances, the Cheltenham Company have the only alternative of adopting the leasing system, or agreeing to the terms of purchase offered by the Great Western. Mr. C. F. SALT was in the chair; and explained the offer now made by the Great Western Company; instead of 2000 original shares, on which 45*l.* had been paid, and 2000 fifth shares, 4*l.* paid—they now offered 3000 half shares, on which 30*l.* had been paid, and the sum of 60,000*l.* towards liabilities; this, with the assets of the company, would be sufficient to pay off all; and the holder of every two shares will receive a half share of the Great Western, which is equal to 60*l.* paid up capital, but worth 90*l.*—After some discussion, a resolution was unanimously adopted, authorising the directors to treat with the Great Western Company at the head of the Great Western Railway Company.

BIRMINGHAM AND GLOUCESTER RAILWAY COMPANY.

The half-yearly general meeting of the shareholders of this company was held at the Bell Hotel, Gloucester, on Wednesday, the 15th inst. (Captain C. R. MOORSOM, R.N., in the chair), when a dividend of 22*s.* per share was declared. The receipts for passengers, goods, mails, &c., amounted, for the half-year ending the 31st December last, to 80,319*l.* 17*s.* 11*d.*; and the charges during the same period were stated at 41,894*l.* 9*s.* 2*d.*—leaving a disposable balance of 9023*l.* 9*s.* 9*d.* To this was to be added the balance in hand on the 30th June, *of* 4337*l.* 18*s.* 6*d.*, making the total disposable balance of 12,963*l.* 8*s.* 3*d.*

MIDLAND COUNTIES RAILWAY.

A special general meeting of proprietors was held at the Athenæum Rooms, Derby, on Tuesday, the 14th instant, "to take into consideration the report of the committee of inquiry, appointed at the special meeting held on the 18th day of November last, and for adopting such resolutions with reference to the said report as may then be thought proper." THOMAS DICEY, Esq., in the chair.—After the usual preliminaries, Mr. J. HEYWORTH handed in the report, and stated that it had received the unqualified assent of every member of the committee, with the exception of Mr. Waddingham, who had not attended the committee meetings.—This gentleman explained that he went all the way with the committee, except on two points, on which, not having attended the meetings, he was not prepared to give an opinion.—The report was then read, which proposed a reduction in salaries and wages, of 7038*l.*, and 600*l.* in the allowance to directors, making 8358*l.* The directors had already carried out reductions to the amount of 6148*l.* 13*s.* 9*d.*, the difference between them and the committee being 2209*l.* 4*s.* 10*d.* per annum.—The directors, in their reply, state they cannot see where this further reduction can possibly be made, the committee having refused all information on the subject; and they wish to place in the strongest point of view, before the public, their conviction, that not one farthing further reduction can be made, without detriment to the company's interest, and danger to the public.—A very long, and somewhat angry, discussion took place, principally by Mr. James Heyworth, with the chairman and his supporters—the greater part of which was entirely void of interest; and, after a motion, by Mr. BUCKLEY, in favour of the directors, and an amendment, by Mr. PAGET, had been canvassed—Mr. BUCKLEY altered his motion to the following: "That this meeting is of opinion that the charges against the directors have been satisfactorily answered, and trust that the present and future directors will take into consideration the retrenchments suggested by the committee, and pursue a course of rigid economy; and that this meeting thank the committee for the trouble they have taken." On a show of hands, the majority appeared against the directors; but, on a poll being demanded, the numbers were—for Mr. Barley's motion, 4137; against it, 3974; leaving a majority of 163 in favour of the directors.—The meeting then broke up.

EDINBURGH AND GLASGOW RAILWAY COMPANY.

The half-yearly general meeting of the shareholders was held on Wednesday, the 8th instant, at the Station-house, Queen-street, Glasgow. JOHN LEARMOUTH, Esq., in the chair. The gross receipts of the line for the half-year had been 59,004*l.* 6*s.* 4*d.*; expenses, 19,181*l.* 12*s.* 4*d.*; and interest of money borrowed, 11,443*l.* 4*s.* 4*d.*—leaving an available balance of 29,369*l.* 11*s.* 8*d.*, for the purposes of a dividend. The report, which recommended a dividend of 5 per cent. for the half-year, was adopted unanimously, and a surplus balance of 4919*l.* would then remain for contingencies.—Mr. HENDERSON again moved the stoppage of the trains on Sunday, and, after much discussion, the shareholders divided, when there appeared for the suppression, the representatives of 3656 shares, and for the continuance of the trains, 4985 shares.

ST. GEORGE STEAM-PACKET COMPANY.

A meeting of the shareholders in this company took place at Cork on Thursday, the 9th inst. (the MAYOR in the chair), when the principal discussion that ensued was upon a circular which had been sent to each shareholder during the previous week, and signed Ebenezer Pike, in which was stated the intention of the directors to agree with another company to run with them in the Cork and Liverpool line—the St. George Company not having a sufficient number of vessels of their own; they, therefore, proposed to form another company, with a capital of 80,000*l.*, in 1000 80*l.* shares—35*l.* only to be called, in four instalments of 6*l.* 5*s.* each, the St. George shareholders to have preference; it was further proposed to build an iron steam-ship, of about 600 tons, two engines, of 150 horse-power each, with all the new improvements. An animated discussion took place, but the meeting broke up without coming to any resolution, deeming it more prudent to let each individual shareholder act for himself, and join in the new scheme if he thought proper.

MINING CORRESPONDENCE.

ENGLISH MINES.

HOLMBUSH MINING COMPANY.

Feb. 13.—Hitchins's shaft is sunk below the ninety fathom level 10 fms. 4 ft. 6 in., which is at a sufficient depth for the 100 fathom level; we are, therefore, now about to drive a cross-cut from the shaft to cut the lode, and also to communicate with the said level from Wall's shaft. In the 110 fathom level west the lode is one foot wide, and worth 12*l.* per fathom. In the 100 fathom level west the lode is eight inches wide, and worth 6*l.* per fathom; at this level east the lode is small and unproductive; in the cross-cut towards the Flapjack lode, at this level, the ground continues favourable for driving; the lode in the stopes, in the back of ditto, is sixteen inches wide, and worth 28*l.* per fathom. The seventy, eighty, and ninety fathom levels, west of Hitchins's shaft, are still progressing in favourable ground; in the winze sinking below the ninety fathom level the lode is fourteen inches wide, and worth 16*l.* per fathom; in the back of this level the lode in the eastern stopes is eighteen inches wide, and worth 32*l.* per fathom; the lode in the middle stopes is two feet wide, and worth 46*l.* per fathom, and in the western stopes eighteen inches wide, and worth 40*l.* per fathom. In the eighty fathom level east the lode is one foot wide, and producing stones of ore; the north lode, at this level, being small, we have removed the men to extend the cross-cut further north, as we think there is another part of the lode in this direction; the lode in the stopes, in the back of ditto, is sixteen inches wide, and worth 28*l.* per fathom. The sixty-two fathom level, both east and west, and the deep adit east, are much as last reported. The pitches are also much the same.

F. PHILLIPS.

WEST WHEAL JEWEL MINING ASSOCIATION.

Feb. 13.—The ground in the eighty cross-cut is much the same as last reported. The seventy east, on the south branch, is worth 6*l.* per fathom; the seventy east, on Wheal Jewel lode, is worth 15*l.* per fathom; the stopes in the back of this level is worth 18*l.* per fathom; the seventy west, on this lode, is worth 20*l.* per fathom; the ground is still very favourable for driving. At the winze sinking in the bottom of the fifty-seven east, the lode is worth 20*l.* per fathom. The lode in the winze, under the forty east, has not been taken down. Since our last we have resumed rising in the back of the forty-two, and are up about four fathoms. We intend to rise to the thirty fathom level, and then drive east over the ore ground driven through in the forty-two fathom level; this we consider a good speculation.

S. LEAN.

TREGOLLAN MINING COMPANY.

Feb. 13.—In consequence of the swampers having been engaged nearly the whole of the past week in sending down and fixing some new pitwork, &c., there has been but little done in the bottom of the shaft since last reported, and here, therefore, no alteration in the appearance of the lode. The shaft is about four fathoms below the level. The lode in the sixty-two fathom level going west is also much the same as last reported, producing a small quantity of ore. The lode, in extending the fifty fathom level east, is producing about half a ton of ore per fathom; this end is about twenty fathoms behind that of the forty. We consider this end has not yet passed through the best part of the lode coming down from the lawrie above. The quantity of ores for next sampling will be about fifty-six tons, which we think will be of a better quality than last parcel.

TRELEIGH CONSOLS MINING COMPANY.

Feb. 11.—At Chrismas, at the eighty fathom level east, the lode is ten inches wide, and worth 3*l.* per fathom. The eighty north-west is suspended for the present. At the seventy west we are rising; the lode is eighteen inches wide, and worth 6*l.* per fathom. The sixty fathom level is communicated with Gardo's shaft, and the men will resume driving west. The fifty west is looking more kindly, but little mineral at present. The forty west is fifteen inches wide, and good stones of ore. At Good Fortune the fifty west is eighteen inches wide, and worth 4*l.* per fathom. At the forty-four west we are fixing, and are sinking a winze to the thirty-four over this; the lodes in both places will be taken down in a few days. The tributs department throughout is looking rather favourable.

W. SYMONS.

CORNUBIAN MINING COMPANY.

Feb. 13.—The north lode, in the seventy fathom level, driving west of the engine-shaft, is one foot wide, composed of fluckan, spar, and mundic. Chiverton lode, in this level, is of just the same character. The sixty fathom level west is producing a little lead. We made an attempt to sink a winze below the sixty fathom level, but are prevented from so doing as yet, the ground not being sufficiently drained. Murray's shaft, below the fifty fathom level, is favourable for sinking. On Friday next we expect to sample about forty tons of lead ore.

J. WEBB.

CONSOLIDATED TRETHOL MINING COMPANY.

Feb. 13.—The lode in Heywood's shaft, sinking under the forty fathom level, is twenty inches wide—good tributs ground. The lode in the forty fathom level, east of Heywood's shaft, is twenty inches wide—very good tributs ground. The tin lode in the level on the adit level, east of Morcom's shaft, is not reported. The Wheal Will's lode, at the adit level, west of Morcom's shaft, is not inches wide, producing some very rich tin work.

H. WILLIAMS. J. MORCOM.

UNITED HILLS MINING COMPANY.

Feb. 14.—At the seventy fathom level, at the eastern end, the lode is four and a half feet wide, two feet good ore; at the western end the lode is small, producing but little ore. At the sixty fathom level, at the eastern end, the lode is four feet wide, and ore of fair quality; at the western end the lode is five feet wide, three feet ore of average quality. At the fifty fathom level the lode is three and a half feet wide, good ore. At James's shaft the lode is three feet wide, one foot on the north part producing ore. At the forty fathom level the lode is two and a half feet wide, producing some ore; a little improved since last reported; the western shaft, at Wheal Sparrow, is unpeaded, in consequence of the water. At the adit west, at Wheal Sparrow, no alteration since last week.

N. LANGDON. S. H. PEARCE.

FOREIGN MINES.

IMPERIAL BRAZILIAN MINING ASSOCIATION.

Gongo Soco, Dec. 3.—A little improvement, I am glad to say, has taken place since my last in the produce from the mine. A box of tolerable work was broken yesterday in some whole ground over the back of Tippett's level, near the spot where, in May, 1841, some good produce was obtained. In the back of the fourteen fathom level, west of Walker's shaft, there are some old arches now working out, which occasionally give a few "hat-caps" of work for the washing-house, and in the back of the forty-one fathom level, east of Curtis's, gold has been seen, and a "hat-cap" of work broken a few days since; the vein is now poor, but not unpromising. In the other parts of the mine no improvement has taken place. The produce from Tabulleiro is less this month than usual, as the stamps were stopped a week, while the wheel was undergoing repairs.

Dec. 13.—Every care that past experience could suggest has been taken in following the veins at Curtis's, and my only regret is, that our exertions have not been attended with better success; you may rely on my steady perseverance in the economical working of the mine. The gold returns do not, I am sorry to say, show that any improvement has taken place in the mine; a little gold has been obtained from some old workings, near to Walker's shaft, and the back of Tippett's level. The produce from the stamps would have been better, but for several stoppages, from breakage of launders and leats, the repairs to which will be completed to-day.

J. K. A. CRICKETT.

Gold report for twenty-five days, to December 12, 58 lbs.

BRAZILIAN COMPANY.

Cata Branca, Dec. 10.—I regret having still to remark on the poverty of the gold report. The water was in the mine in the early part of the week, and since then we have been forcing down the shaft, in order to get into a better position for breaking ground. Next week will bring us partially on the line west of shaft, and I trust our expectations as to its giving a better return will then be realised.

W. T. GRIFFITHS.

Gold report for two weeks to 9th December, 23 lbs. 10 oz. 6 dwts. 21 grs.—Ditto for the month of November, 68 lbs. 5 oz. 15 dwts. 22 grs.

MINING NOTICES.

EAST CORNWALL MINING ASSOCIATION.—As announced in our late numbers, the whole property of this association was put up to public sale, at the Auction Mart, on Wednesday, the 15th inst. It consisted of the whole of the mines formerly worked by them—Brandize, Hallealle and Hryn Tyo Bounds, the Beacon Bounds, the Welcome-by-Tin Bounds, the Corner Bounds, Holywell Bounds, and a sett on Trevarrion Common; also a judgment-debt for 900*l.* (obtained against Christopher Alderson), and the steam-engine and machinery, all in excellent working order. Mr. Fuller, the auctioneer, described the property, and stated the upset price named by the vendor to be 1000*l.*; but, with all his eloquence, could not succeed in effecting a sale.

TRIMDON COLLIERY—*(From a Correspondent).*—The celebrated five-quarter seam of coal, four feet thick, was sunk to at this colliery on the 1st inst., at the depth of seventy fathoms from the surface. The period in reaching such depth is only eight months from the time of breaking ground, and, considering the depth of limestone and sand sunk through, together with the quantity of water to encounter with, the dispatch is unparalleled in the history of mining pursuits. In addition to the various erections necessary for effectually completing the "winning," no fewer than 150 workmen's cottages are already built. The "winning" has been conducted under the entire management of T. C. Gibson, Esq., of Newcastle, the principal owner, and Mr. A. Seymour, the viewer.

MINE ACCIDENTS.

Coal Pit Explosion—Verdict of Manslaughter.—The Victoria coal mine at Dukinfield abounds with fire-damp, and the proprietors, Messrs. Shire and Lees, in order to prevent accidents, have had rules printed, and posted where the men can see them; one of them is to prevent the men taking a lighted candle into the mine before working in the morning. In defiance of this excellent regulation, a man named William Morris, on the 27th January last, went into a part of the mine abounding with light carburetted hydrogen, which he placed on a stump, in a current of foul air; an explosion shortly afterwards took place, and Joshua Smith, a lad thirteen years of age, was so dreadfully burnt, that after lingering until Saturday, the 4th inst., death put an end to his sufferings, and, on the coroner's inquest on the Wednesday following, a verdict of "manslaughter" was returned against William Morris, who has since absconded.

Rhosfach.—A young man, named John Watkins, was so much injured on Tuesday, the 7th inst., by a fall of earth and stones, while working in a patch, that he died next day.

Tyne Main Colliery.—On Saturday, the 4th inst., as Robert Kemp was about to descend the shaft, his foot slipped, and he fell to the bottom, and died instantly.

Friar's Goose Pit.—On the same day, as Robert Keays was ascending from this pit in a corve, he was, by some means, at present unaccounted for, thrown down the shaft, and killed.

Pengdarran Colliery.—On the 4th inst., William Howard while at work in one of the levels, a quantity of rubbish fell upon and so severely injured him, that he expired on the following day.

Black Boy Colliery.—On the 6th inst., John Thompson, a joiner, being employed in the Gurney Pit, repairing the shaft, was sitting on the bunting with his feet upon the cage, which was partly down the shaft, when a man named Waugh called loudly at the pit's mouth for some instrument he wanted, and the brakesman, thinking it was Thompson wanting to come up, put to the engine, and the cage catching Thompson by the legs and head, crushed him against the shaft, and threw him to the bottom, from whence he was taken up quite dead.

Tincroft Mine.—William Glasson was killed from a kibble falling on him through one of the winzes.

Holmbush Mine.—On the 2d inst., as a man was at work, a chain fell on him, and killed him on the spot.

Delabole Slate Quarry.—On Monday, the 6th inst., as six men were at work on a projecting piece of rock 100 feet perpendicular height above an old quarry, a land slip took place, precipitating the whole, with awful violence, to the bottom; neither of them spoke or moved afterwards, and were dreadfully mutilated. One was thrown further than the others, into a deep pool, where a large stone must have fallen on him, as, on dragging for the body, the log came off.

Brunswick Works, Dean Forest.—A man employed in sinking a pit at these works was being lowered in the bucket, when, by some accident, the handle was let go, and he was precipitated to the bottom (ninety feet) into six feet water, the bucket over him, bottom upwards; fearing an accident had happened, the man at the winch wound up, and when the bucket was raised half-way, he heard the man below call out to wind quicker, or he must let go his hold; he was raised, of course, as quick as possible, and a few seconds saw him standing on the bank aghast.

DEVON AND CORNWALL RAILWAY.—We have been favoured with the copy of a letter dated February 11, addressed by Corbett J. W. Ellis, Esq., to J. M. Tweedy, Esq. (secretary to the railway committee), in which he bitterly complains, and with much justice, of the apathy which has been exhibited ever since the formation of the committee in this important and even national undertaking. It appears that Mr. Tweedy, in his official capacity, applied to Mr. Ellis, inclosing the resolutions of a meeting held on the 10th ult., and requesting "further pecuniary assistance to aid in the discharge of debts incurred in the past expenditure of the committee, beyond the sum already subscribed;" in reference to which he states, that long before the formation of the committee in 1839, he had spared neither time or purse in endeavouring to promote the desired object, which he firmly believed indispensable for securing to his native county that prosperous position in relation to other parts of the kingdom, which he conceived to be fairly due to the industry and intelligence of its population; he has, ever since, watched and waited for favourable results of the committee, and expresses his bitter disappointment at the impotent results, and further maintains that the county has been inhumanly and ill served in a matter of the most vital importance to its interests, while he is confident that had the matter been taken up with proper spirit, and had its apparent friends applied at once to the land proprietors, mine adventurers, and merchants, and properly canvassed the length and breadth of the county, appealed to the Great Western Railway Company to lend a helping hand in extending their line, and put themselves in active communication upon this "Cornish question of questions," with the capitalists of London, Birmingham, and the North of England, as this a powerful company would have been formed, ground would have been broken, and the first elements of being lost to the field of enterprise, would not have attached to them. He concludes, by again expressing his dissatisfaction of the "land sky, and finis word" (some of the committee's expressions), and states that he must keep of more earnest exertions being excited up on their behalf to the extent fully inherent in their proceedings, by finishing deeds for their exchequer.

SMOKE NUISANCE.—ECONOMY OF FUEL WITHOUT the NUISANCE from SMOKE, by C. W. WILLIAMS'S ARGAND FURNACE.—The principle of this furnace consists in the mode by which the air is introduced to the gaseous matter evolved from coal, whereby a more perfect combustion of the constituents is effected, the process being conducted on true chemical principles, as explained by Mr. Williams, in his *Treatise on the Combustion of Coal.* A furnace, constructed on this principle may, by permission, be daily seen in action at the Water-works, Soho-street, and Manchester Railway Station, Edge-hill, *Liverpool.*

For further information, apply to Dierks and Co., agents, 3, Town-hall-buildings, Cross-street, *Manchester.*

CAUTION.—SMOKE PREVENTION.—Mr. JOSEPH WILLIAMS.—The public have already been CAUTIONED, by the ADVERTISEMENT OF DIERKS and CO. (*see the Mining Journal, the Albion* and other Liverpool papers), AGAINST the IMPOSITIONS PRACTISED by Mr. JOSEPH WILLIAMS, of this town, who, having no patent of his own, has, under colour of applying the patent of Mr. Kurtz, been introducing MODIFICATIONS and INFRINGEMENTS of the PATENT of Mr. C. W. WILLIAMS, for the MODE of INTRODUCING AIR to FURNACES and the PREVENTION of SMOKE.

In his late advertisement (*see the Mining Journal,* and the *Mercury* of the 31st December), Mr. Joseph Williams states as follows:—"That he is the acting proprietor of Kurtz's patent; and the fact, that the patent is the smoke consumer which he declares it to be, was acknowledged by Mr. Andrew Kurtz himself on board the *Urgent.*" To this allegation Mr. C. Williams states, on the authority of Mr. Kurtz himself, that that gentleman was asked to go on board the *Urgent*, the object being, artfully, to convey an impression that Mr. Kurtz was connected with what was done to the furnaces of that vessel, and sanctioned the same; that Mr. Kurtz was there, for the first time, informed of what was done on board the *Urgent*, under Mr. Joseph Williams's directions, and of the apparatus behind the furnaces bridges for regulating the size of the orifices through which the air is admitted, and that he (Mr. Kurtz) at once disavowed the same, as not forming any part of his patent; that the plan adopted in the *Urgent*, as regards the situation of the fire bars, was also subsequently altered—thus departing still further from Mr. Kurtz's patent; and that, so far from the plan or apparatus so adopted by Mr. Joseph Williams being "acknowledged by Mr. Kurtz," such assertion is not only false, but directly the reverse of the fact.

It is hereby further stated, that the mode of admitting the air adopted by Mr. J. Williams, and by which he attempted to deceive the Admiralty and the public, under pretence of its being the patent of Mr. Kurtz, is in no way conformable to that patent, and that neither Mr. Joseph Williams, nor any one connected with him, has a patent for the same—such being a direct infringement of Mr. C. W. Williams's patent.—*Liverpool, Jan. 7.*

SMOKE NUISANCE.—Mr. JOSEPH WILLIAMS, of 67, Bedford-street, Toxteth-park, near Liverpool, has the authority of Sir John Barrow, Bart., the Secretary to the Admiralty, for announcing to the public, that the PATENT APPARATUS (Andrew Kurtz's patent) for the COMBUSTION of SMOKE and SAVING of COAL, attached to her Majesty's steam-packet *Urgent*, Lieut. Emerson, R.N., commander, after being in use for six months on the Post-office station between Liverpool and Dublin, is found to answer in every respect, and to the six months' saving of coals upon the *Urgent* has been about 400 tons, as per amended report. The apparatus is simple in its construction, and is equally adapted for land and marine engines. The patentees have forborne pressing their invention upon the public, until its merits could be ascertained by adequate trial. This it has undergone upon a large vessel plying in the Channel throughout the winter months, and they, therefore, now feel warranted in inviting the attention to it of all persons anxious for the removal of the nuisance of smoke from steam-engines. To those who are concerned in steam navigation it may not be unseasonable to mention, that, with this apparatus, a steam vessel going before the wind has no occasion to open hot furnace doors, or to alter her course in order to keep a look-out a-head—having no longer a cloud of smoke hanging over the bows, she can keep her course without slackening her speed.

Messrs. Dierks and Co., the agents of Mr. C. Wye Williams's patent, jealous of the advertiser's success, state that he has no patent; to which proprietorious assertion he shall only reply, that he is the acting proprietor of Kurtz's patent, for his share in which he has paid pecuniary value, as is proved by documents in his possession, and which he has exhibited to the editors of the *Liverpool Mercury*; and the fact that the patent is the smoke consumer, which he declares it to be, was acknowledged by Mr. Kurtz himself, to Captain Emerson, Mr. Elliott, the engineer, and Mr. John Hamilton, on board the *Urgent*, on the day that vessel first sailed, after the patent apparatus had been applied to it—namely, on the 5th December, 1841.

For terms and particulars application may be made to Mr. Joseph Williams, 67, Bedford-street, Toxteth-park, near Liverpool; to Mr. Wilson Hamilton, Woodside Ferry, Cheshire; to Mr. John Bewley, accountant, Brunswick-street, or to Messrs. Lowndes, Ridgeway, and Bateson, solicitors, Liverpool.

"This is to certify that we have had the Patent Smoke Consuming Apparatus of Joseph Williams and Co., 67, Bedford-street, Toxteth-park, in operation at the flax mills belonging to Duncan Gibb, Esq., for the last three months, and we consider it to be a very great saving (at least one third) in the consumption of coals, and the nuisance from smoke, which was so greatly complained of in the neighbourhood, is now completely removed.

The apparatus, which is upon the principle of hot air (of the superiority of which every coal ale we are satisfied, from ample experience), is simple and easily constructed and kept in order, and we can strongly recommend it to any party who has a boiler in use.

THOMAS HALSALL,
ROBERT SMITH,
THOMAS MURPHY, Firemen. } Managers.

Stanhope-street Patent flax-mills, August 24, 1842."

"I believe the above report to be correct. DUNCAN GIBB."

SMOKE.—The following remarks on RODDA'S PLAN were made at the meeting of the Leeds Smoke Committee, held Jan. 26, 1843:—

The Rev. J. A. Rogerson said, that, if the meeting would permit him, he would mention what plans he knew to be very effectual. He had been for years annoyed at his residence at Mytholm by the smoke arising from the mill of Messrs. Robinson and Co., at that place. He had remonstrated with them on the subject, but, being the owner of a mill himself, he thought it best to try to prevent smoke at his own mill, in order that, if he succeeded, he might have good grounds for his remonstrance with Messrs. Robinson and Co. The mill of which he was the owner was that of Messrs. Walker, at Hilsbay; and at it Mr. Rodda was employed, and he had since seen that gentleman's plan in full operation there, and had examined it closely, and certainly the apparatus had been put up to his (Mr. Rodda's) entire satisfaction, and was quite effective in preventing smoke.—Mr. Marcus had had Rodda's plan in use for six months, and he could bear to its good effects.

Mr. Hargreaves said that he had found Rodda's better than five or six other plans that he had tried. He had persevered in the use of Rodda's apparatus, which prevented smoke, effected a saving in the fuel, and had other advantages—such as raising the steam quickly, and keeping it up a regular height with very little attention on the part of the fireman. "So soon as ever smoke was generated, the apparatus possessed means of destroying it; and the only time when there was smoke was when fresh coals were thrown on the fire, and then there was not much smoke, and that was not visible more than half a minute. The coals he was using were carbonised slack, which he found to answer very well, and his mill was quite free from smoke. He believed that Mr. Rodda's plan was applicable to fire-house pans and to all sorts of furnaces except to the retaining (Brunton's) grates.

Mr. Atkinson inquired if any plan that was known could prevent a large quantity of smoke being emitted when a fire was first lighted?—Mr. Hargreaves replied that Mr. Rodda's did to a great extent.

Mr. Lupton said that Messrs. Pease and Hendon, and also Mr. Gowgate, had applied Rodda's plan to their dye-pans, and found it to answer exceedingly well.—Mr. Hargreaves had seen the plan in operation at Messrs. Pease and Hendon's, and he could testify that it was quite effective. It was only when Mr. Rodda's attendance were not observed that smoke was generated. With regard to the best means of engaging attention on the part of firemen, Mr. Hudforth stated how he did with his men. He went to the fireman and said, when the plan was in effective operation, "Now, you see there is no smoke, and you see, if the apparatus is properly attended to, there will be no smoke." "Yes," said the man. "Well, then," replied Mr. Hudforth, "take notice and remember, that if I see any smoke coming out of the top of the chimney you must take that as a month's notice to quit." This he found had the effect of making the men attentive to his duties; and if he managed well, and to his (Mr. Hudforth's) satisfaction, he occasionally gave him a little reward.

R. RODDA is now in LEEDS, and begs to inform the PROPRIETORS of STEAM ENGINES, &c., in Yorkshire, Lancashire, and elsewhere, that he has REDUCED HIS PRICES, and is also furnished with numerous testimonials as to the perfect success of his plan for CONSUMING SMOKE and SAVING FUEL.—Communications, addressed to 11, Briggate, Leeds, attended to immediately.

WRIGHT'S PATENT DRAG.—The use of a drag to carriages being admitted, parties wishing for safety and relief to their horses have now an opportunity of having one on the most improved principle, such as has never been offered to the public before, the carriage being stopped or retarded at pleasure by the person driving, without losing his seat or stopping the vehicle. All who are to the front of driving must see the great benefit obtained from scrambling the wheel before reaching the bottom of a hill, or that, if another is to be ascended, the gravity stage not be impeded, wherever time is saved and the horses relieved from the drag-chain, for want of the simplest contrivance for hooking the carriage, which must be done quicker and better stopped, to relieve the wheel. An obvious saving is also effected, the great wear and tear of former plans being when the shoe is not required, yet cannot be removed.—WRIGHT'S PATENT DRAG has now been in USE for the last TWO YEARS, being FIXED to the "ROCKET" VENTNOR COACH, travelling daily on one of the most hilly roads in the Isle of Wight, the journey from Ryde to Ventnor, thirteen miles, being performed in less time, by half an hour, than by the former mode of travelling, with much greater ease to the horses, and to the satisfaction of the proprietors, as shown by their testimonial. It can be applied without regard to the pace, in case of accident, and may be accomplished by a child ten years of age.

Parties may be supplied with the apparatus, complete, on applying at the office of the proprietor, 13, Church-street, Soho, London.

January 15. All letters pre-paid.

TO THE PROPRIETOR OF WRIGHT'S PATENT DRAG.

Regent Fine Hotel, Ryde, July 21, 1842.

SIR,—Having had your drag in use on the Rocket coach, running daily from Newport to this place and Ventnor, and back, over one of the most hilly roads in the Isle of Wight, during the last two seasons, we express our satisfaction in its use, because, affording a great relief to the horses, and a saving of time, full half an hour, between Ryde and Ventnor—a distance of thirteen miles, and the lowest priced drag, when known, will be generally adopted. We are, &c.,

OSWALD REVELL,
WILLIAM LAMBERT, Coachmen,
JOHN WHITTINGTON, Coachman. } Proprietors.

BRISTOL AND EXETER RAILWAY.—Notice is hereby given, that the next HALF YEARLY GENERAL MEETING of the proprietors of this company will be held, in pursuance of the Act of Parliament, at the White Lion Hotel, in the city of Bristol, on Thursday, the 24th of March, at twelve o'clock, for the election of four directors, in the room of those who retire by rotation; and for other affairs. The chair will be taken at one o'clock precisely.

FREDERICK RICKETTS, Chairman.

The retiring directors may be re-elected.—Shares in arrear do not entitle the holders to vote.—The transfer books will be closed on Monday, the 20th of February, and not re-opened until after the said general meeting, on the 24 of March.

By order of the board of directors,
J. B. BADHAM, Secretary.

Office, 59, Broad-street, Bristol, Feb. 18.

BOLTON AND PRESTON RAILWAY COMPANY.
TENDERS FOR LOANS ON MORTGAGE.—The directors of this company are prepared, under powers of their Acts of Parliament, to RECEIVE TENDERS for the LOAN of MONEY, in sums of not less than £200, and for terms of three, five, seven, or ten years, and to GRANT MORTGAGES of the said undertaking, and of the rates, tolls, or monies arising therefrom, as security for such loans, bearing interest at the rate of 5 per cent. per annum. INTEREST WARRANTS, for the whole term for which the loan shall be made, will be delivered to the lenders along with the mortgages, and be made payable half-yearly, at the company's bankers in London, or Bolton, as may be preferred. The lenders are to express the sums and the term of years for which the same are proposed to be lent, and to be addressed to the secretary, at the company's office, Bolton.

By order of the board of directors,
Bolton, August 30. PETER SINCLAIR, Secretary.

NEWPORT AND NANTYGLO RAILWAY.
CAPITAL £280,000,
In 5600 shares of £50 each.—Deposit £5 per share.—No call to be made at less intervals than three months.

PROSPECTUS.

It appears, by the annexed report of Messrs. Hodgkinson and Marsh (the engineers) that the above railway (first proposed to be constructed as a single line, the whole distance of twenty-four miles and thirty-one chains, at an estimated expense of £240,000) will cost, with a DOUBLE LINE FROM and ALONG the NEWPORT WHARFS TO PONTYPOOL, the sum of £275,000. The estimated revenue is as under:—

The average annual income from the iron works, now established on the line at 1½d. per ton per mile for conveyance and railway dues, will be at least	£11,000 0 0
The passenger traffic, at very moderate fares	11,068 15 0
The coal traffic, 300,000 tons per annum of home and steam coal, carried thirteen miles, on the average at 1½d. per ton per mile, including every expense. (The present coal trade of the town of Newport averages 700,000 tons per annum, and the cost of transit on the existing tramways and canals is not much less than 1½d. per ton per mile.)	20,312 19 0
General merchandise, including food and clothing for a large mining population, provender for horses employed at the works, back carriage of foreign iron ore, carriage of mails, fire bricks, &c., at a very moderate calculation	7,000 0 0
Total revenue	£50,381 5 0
It is considered that the cost of working the line, at an average speed of from twelve to fifteen miles an hour for passengers, and from six to eight miles an hour for the iron and coal traffic, with an expense for coke not exceeding 9s. per ton, will be about one-third of the estimated revenue	£16,760 9 4
Dividend on capital of £280,000, at £10 per cent.	28,000 0 0
Surplus for depreciation of stock, &c.	5,620 16 8
Total	£50,381 5 0

The above estimates, with the various details upon which they are founded, were submitted to the consideration of a public meeting, of gentlemen connected with the iron and coal districts of Monmouthshire, held, in pursuance of public advertisement, in the Great Hall of the New Town Council-house, at Newport, on Thursday, the 13th day of January, 1843, and were unanimously approved of.

An Act, for the incorporation of a company for making and maintaining the above railway, will be applied for at the commencement of the ensuing session, all the notices for that purpose having been duly given, plans deposited, &c., according to the orders of the two Houses of Parliament. It is proposed that this Act shall contain all the powers, provisions, and clauses usually inserted in Railway Acts, which limit the liability of the shareholders to the extent of their shares.

The proceedings in Parliament will be conducted by a provisional committee, who will give their gratuitous personal services for that purpose. Immediately after the Act shall have been obtained, a general meeting of the shareholders will be called, for the election of a committee of management.

A deposit of £5 on each £50 share is required to be forthwith paid into one of the undermentioned banking-houses or their respective branches:—

Monmouthshire and Glamorganshire	Messrs. Bailey and Co. Monmouth and Glamorgan Bank. Messrs. Bromage and Snead. The West of England Bank.
Bristol, Bath, &c.	Messrs. Baillie and Co. Messrs. Stuckey's. The West of England.
Worcester & branches	The National Provincial Bank of England.
London	Messrs Masterman and Co. The London Joint-Stock Bank. Messrs. Rogers, Olding, and Co.
Liverpool	The Bank of Liverpool.

Applications for the remaining shares to be made in the following form:—

I request that you will reserve and secure to me shares, of £50 each, in the Newport and Nantyglo Railway Company, and, in consideration of your so doing, I agree, on receiving notice of the allotment, to pay the deposit of £5 per share in respect thereof, or of such of them as shall be granted to me, and to execute the Parliamentary Contract and Subscribers' Agreement, whenever called on so to do. Dated this day of , 1843.

Name
Residence
Designation

To the Provisional Committee of the Newport and Nantyglo Railway Company, Newport, Monmouthshire.

By order of the provisional committee,
Newport, Jan. 12. R. J. BLEWITT, Chairman.

REPORT OF MESSRS. HODGKINSON AND MARSH, CIVIL ENGINEERS.

On a projected line of railway from Newport to Nantyglo, in the county of Monmouth, passing through the town of Pontypool, the Pontnewydd, Pontwyn, Aberavchan, Golynos and Varteg Iron Works, through the Llanhilleth Mountain, the Cwm Calyn, Blaina, Coalbrook Vale, and Nantyglo Iron Works:—

The plan prepared by Mr. Morris, surveyor, shows the line of proposed railway, which will pass through a district of country admirably adapted for the undertaking, affording every facility for the construction of the road, abounding with excellent stone for building and lime, and where rails, timber, and other materials, may be obtained at little expense of carriage; possessing, also, a constant supply of water, for locomotive and other purposes.

The length of the line, with its branches, will be twenty-four miles and thirty-one chains. The main line commences at a point near Jack's Pill, between the New Ship Dock and the Rover Usk, Newport, at an elevation of seventeen feet, and proceeds again a level to the Cardiff road; thence, by a plane of 602 yards, of an inclination of 1 in 14, to the site of the intended passenger station at Stow hill; thence to High Cross, Cwm Llanderu, Panlyr' Rin, Cocky North, and Mr. Hanson's inclined plane, a distance of six miles, at a gradient of one in 117; from thence to Green Meadow, across the incline plane from Cwmbran Colliery, to Cwmbran and Pontymoile (between which latter places a junction with the Brecon Canal may be easily obtained, with a good gradient, should that canal be converted into a railroad); and at which point, also, a very convenient communication may be made with the Pontrunnin Rolling Mills and Tin Works, to the intended station at Stow hill, Pontypool, and Pontnewydd Iron Rolling Mills, a distance of five and a half miles, at a gradient of one in 32; thence, by a plane of 960 yards, of an inclination of one in twelve, to the junction of the proposed branch, which leads to the Pontwyn, Aberavchan, and Golynos Iron Works, a distance of 3640 yards, at a gradient of one in 162, and into the grounds of the Varteg Works, a distance of 720 yards, making the total length of this branch two miles and seven chains.

The main line passes up Cwm Nant Pibi, by several coal and mine works, through the Llanhilleth mountain (well known for its produce of a superior quality of coal), by a tunnel, 240 yards in length, and will pass through a vein of coal for a considerable distance (which will greatly facilitate the formation of the same), to the Aberyscirrith Valley, passing various iron works, to Cwm Thery, and within a few hundred yards of the newly opened and important works in that valley, to the iron works at Cwm Calyn, and Blaina, with a short branch (320 yards) to the grounds of the Cinderford Vale Company, to, and terminating at, the Nantyglo Iron Works, a distance of eight miles and twenty-nine chains, at a gradient of one in 150.

The total length of the main line, from its commencement near Newport Docks, to Nantyglo, is twenty-one miles and twenty-three chains, being a shorter distance than the greatest lines of conveyance.

The curves on the main line are in no instance of less radius than a quarter of a mile, and only in few places has so small a one been introduced.

The two inclined planes may be well acting—the descending load bringing up the ascending; but the expense of engines is included in the estimate, to work in case of need. The rate of travelling upon this line way, with great safety, be thirty miles per hour, which is more than double the speed required for the profitable carriage of heavy goods, as found, by experience, on other lines.

The main line of railway will be double from Newport to Pontypool, with a double line to communicate with the wharfs, from Jack's Pill to Newport Bridge; and the remaining portion, with its branches, will be a single line of way. The total cost of the main line and branches, when completed, we estimate as follows:—

Construction of railway and branches, including stations, incline engines, &c., &c.	£222,840 1 6
Contingencies, 10 per cent.	22,784 6 6
	£245,625 0 0
Locomotive engines, and other stock, required for working the line and branches	24,375 11 6
Total cost	£270,000 0 0

We are of opinion that the whole of the above works, with a single line only as originally intended, would not have exceeded £240,000, the amount stated in the original prospectus.

JOHN HODGKINSON.
Jan. 26. THOMAS S. MARSH.

EUROPEAN LIFE INSURANCE COMPANY.
No. 16, CHATHAM-PLACE, BLACKFRIARS, LONDON.

Established, January, 1819.

PRESIDENT—Sir JAMES RIVETT CARNAC, Bart., Rock Cliff, Lymington.
VICE-PRESIDENT—GEORGE FORBES, Esq., 9, Fitzroy-square.

WITH TWELVE DIRECTORS.

FACILITIES are offered by this long established society to suit the views and the means of every class of insurers. Premiums are received yearly, half-yearly, or quarterly—or upon an increasing or decreasing scale. The insured for life participate septennially in the profits realised. A liberal commission is allowed to solicitors and agents. DAVID FOGGO, Secretary.

N.B.—Agents are wanted in towns where none have been yet appointed.

MUTUAL LIFE ASSURANCE SOCIETY,
ESTABLISHED 1834—37, OLD JEWRY.

At a General Meeting of the members of this society, holden the 19th of January inst., the accounts of the society were presented, made up to the 31st of December, 1841, and a bonus, by way of addition to the sum assured, was declared on all policies in the society on which two premiums had been paid.

The bonus, on an average, amounts to £38 per cent. on the premiums actually paid.—The following is a specimen of the additions actually made to the nine policies first granted by the society:—

1834. Policy. No.	Sum Assured	Premiums.	Admission Age.	Additions.	The addition amounts to the following rates per cent. on the amount of the premiums paid.
1	£1000	£34 0 0	29	£146 19 0	£39 4 0
2	2000	71 13 4	43	305 10 0	42 8 0
3	2000	98 13 4	50	416 16 0	43 19 0
4	2000	82 11 8	47	398 4 0	48 15 0
5	1500	72 6 3	53	319 4 0	42 16 0
6	500	9 13 6	21	65 18 0	36 10 0
7	1000	40 1 6	45	192 4 0	48 10 0
8	2000	114 0 0	57	473 10 0	49 4 0
10	1500	43 1 3	35	241 6 0	54 8 0

By order of the board, PETER HARDY, Actuary.

BRITANNIA LIFE ASSURANCE COMPANY,
1, PRINCES-STREET, BANK, LONDON.

This institution is empowered by special Act of Parliament (4 Vict., cap. ix.), and is so constituted as to afford the benefits of life assurance, in their fullest extent, to policy-holders, and to present greater facilities and accommodation than are usually offered by other companies. The decided superiority of its plan, and its claim to public preference and support, have been proved incontestibly, by its extraordinary and unprecedented success.

Assurances may either be effected by parties on their own lives, or by parties interested therein on the lives of others.

The effect of an assurance on a person's own life, is to create, at once, a property in reversion, which can by no other means be realised. Take, for instance, the case of a person at the age of thirty, who, by the payment of £1 5s. 4d. to the Britannia Life Assurance Company, can become at once possessed of a bequeathable property amounting to £1000, subject only to the condition of his continuing the same payment quarterly during the remainder of his life—a condition which may be fulfilled by the mere saving of eight shillings weekly in his expenditure. Thus, by the exertion of a very slight degree of economy—such, indeed, as can scarcely be felt as an inconvenience—he may at once realise a capital of £1000, which he can bequeath, or dispose of, in any way he may think proper.

Detailed prospectuses, and every requisite information as to the mode of effecting assurances, may be obtained at the office.

PETER MORRISON, Resident Director.

A board of directors attend daily, at two o'clock, for the despatch of business.

DISEASED AND HEALTHY LIVES ASSURED.
MEDICAL, INVALID, AND GENERAL LIFE OFFICE,
23, PALL-MALL, LONDON.—Capital £500,000.

This office is provided with very accurately constructed Tables, by which it can ASSURE DISEASED LIVES on equitable terms.

The Extra Premium discontinued on restoration of the assured to permanent health.
INCREASED ANNUITIES granted on Unsound Lives—the amount varying with the particular disease.
Members of Consumptive Families assured at equitable rates.
HEALTHY LIVES are assured at Lower Rates than at most other offices.

F. G. P. NEILSON, Actuary.

This day is published, with maps, plans, and diagrams, 8vo., price 15s.,

PRINCIPLES AND PRACTICE OF LAND ENGINEERING,
TRIGONOMETRICAL, SUBTERRANEOUS, and MARINE SURVEYING.
By C. BOURNE, C.E.
And Surveyor, Associate of the Institution of Civil Engineers.
London: John Ollivier, 59, Pall-mall.

Just published, Part I.,

COMBUSTION of COAL, CHEMICALLY & PRACTICALLY CONSIDERED. With coloured plates.
By CHARLES WYE WILLIAMS, Esq.
London: Simpkin, Marshall, & Co., and J. Weale; Birmingham: Wrightson & Webb.

In 8vo., pp. 106, price 2s. 6d.,

THE HYDRAULIC RAILWAY; being a carefully digested, but plain, statement of the advantages to be derived, and the impediments removed, in establishing hydraulic propulsion on railways, with a wide frontispiece of the hydraulic railway in operation, and a large drawing of its machinery.
By J. G. SHUTTLEWORTH, the Patentee.
Sold by J. Weale, High Holborn, London; J. and J. Thomson, and Simms and Denham, Manchester; Wrightson and Webb, Birmingham; and by all booksellers.

A COMPENDIUM OF BRITISH MINING, with STATISTICAL NOTICES of the PRINCIPAL MINES in CORNWALL, with the HISTORY and USES of METALS, and a GLOSSARY of the TERMS and USAGES of MINING.
By JOSEPH YELLOLY WATSON.

A few copies of this work (printed for private circulation) may be had, price 5s., of Mr. John Weale, publisher, 59, High Holborn, or of Mr. Watson, 56, Threadneedle-street, London.

NOTICES TO CORRESPONDENTS.

The MINING JOURNAL *is regularly published about Two o'clock on Saturday afternoon, at the office, No. 26, FLEET-STREET, where it can always be obtained, and there is no cause for irregularity in its supply, in town, other than neglect on the part of the agent through whom it is ordered; but, as regards its transmission to country subscribers, the blame is shared with the Post-office authorities.*

More extensive premises than those lately occupied being found necessary, the establishment of the *Mining Journal* is REMOVED TO 26, FLEET-STREET (opposite St. Dunstan's Church).

We cannot devote space at present for "R. Y.'s" communication on the Management and Prospects of Continental Railways.

"J. M." (Hull) will receive a reply by post.

HYDRAULIC RAILWAY.—The article on this subject, published in last week's Journal, contained an error, which we have been requested to correct. In the fourth paragraph, line 21, *for* "placing under the water," *read* "placing the water under," &c. We have complied with the request of our correspondent, but we think the error would be evident to all who are interested in the question, as a typographical one, and of common occurrence in newspaper printing.

HOT AND COLD BLAST IRON.—"C. B." (Sheffield) will, doubtless, have received a communication explanatory of the withdrawal of his communication; if not, we should be glad to hear from him.

"J. R." (Bradford).—We cannot account for the non-receipt of the *Journal*, other than that fraudulent practices exist, in some way or other, in connection with the Post-office authorities; we are weekly in receipt of several similar complaints, and the anticipation of a remedy appears almost hopeless. Really some measures should be adopted, on the part of Government, to prevent the pilfering which takes place at the Post-office, and through their agents.

VALUABLE GEOLOGIST.—"A Contractor" (Newcastle-on-Tyne) can ascertain what he requires, in reference to this "tremendous excavation," on application to Mr. Weale, of Holborn, London, the publisher of *Examples of Railway Making*—which work contains, together with what has appeared in our Journal, all known particulars of its performances and properties.

DATA FOR BLAST-FURNACE MANAGERS.—"E. S." (Dublin) is informed that the able series of papers appear originally and exclusively in the *Mining Journal*, and we are not aware of the probability of their publication in a separate form; for further answer to his questions, address the author, Mr. S. B. Rogers, Nantyglo, Monmouthshire, who will readily reply.

"A Workman" regrets in a communication, for which we cannot find space, that he cannot oblige Mr. Dennis with "his habitation and name," but begs to assure him that his investigations are "faithful portraits." We readily give our opinion, that the utmost confidence can be placed in all that emanates from "A Workman," whose communications, on whatever subject they may treat, we have ever read with pleasure, as being the productions of a practical man, who has, on more than one occasion, displayed a perfect knowledge of the subject on which he writes.

The communication on the Government Currency Plan is inadmissible; it is left in our office, as desired.

"T. V." (Sunderland).—Apply to Mr. W. I. Barker, shareholder, of Bridge-street, who is, doubtless, in possession of all the required information, and, if not, he will readily obtain it.

"R. H." (City).—We are obliged to our correspondent for directing attention to the subject, which received immediate attention, and will appear (notice) in our next.

"A Mine Adventurer" (Penzance).—We should esteem it a great favour if our correspondent would send us the particulars he alludes to, and only with respect to the mine mentioned, but of any other with which he may be connected. We are obliged to him for his present letter, which, he will perceive, has been attended to in the proper place.

"A Shareholder in the 'Imperial Brazilian'" should apply to the secretary (Mr. G. Thomas), at the office of the association, Old Broad-street, who will, probably, furnish the information respecting the constitution of the establishment at Gongo Soco. We are not in possession of further particulars than what has already appeared in the *Journal*, which we think all that can be of interest—or, indeed, necessary—for the shareholders.

"H." (St. Day), on Mr. Slate's improvement on the Steam-Engine, will be inserted in our next.

THE MINING JOURNAL,
Railway and Commercial Gazette.

LONDON, FEBRUARY 18, 1843.

*** Parties desirous of ordering the *Mining Journal*, can do so, either direct to the office, or through any newsvender or bookseller in town or country. Notices of irregularity in its delivery are requested to be forwarded to the office, where every attention will be made to rectify the cause of complaint.

It will be seen, by the judgment pronounced by the Court of Queen's Bench in the case "Smith *v.* Goldsworthy," that the question so long pending between "the united shareholders" in the British Iron Company and the directors, has, at length, been decided. Having given, in another column, the decision of the learned Judges of the Court of Queen's Bench, a very few words will suffice, in directing attention to the question raised, the importance of which will be well understood by those who allow that common sense is the basis on which the law is formed; although we find that the colour given to a question by counsel, in too many instances, has an effect on the minds of the jury. Lord DENMAN, in pronouncing judgment, unhesitatingly states, that the shareholders are liable to the payment of all calls made by the directors, to the extent of 100*l.* per share, being the original amount of capital proposed to be raised under the terms and conditions of the prospectus of the company; inasmuch that, in his opinion, such could not be altered by any resolution arrived at by the proprietors at any general, or special general, meeting; such alteration, affecting, as it did, the basis on which the company was formed.

His lordship further added, with the view to remove any doubt which might exist on the subject, that, even assuming his dictum to be in error, yet it was perfectly clear the body of proprietors, who at a special general meeting (confirmed by a subsequent one), might determine on reducing the capital of the company one-half, or the shares from 100*l.* to 50*l.*, could, with the same powers, and by the same rules, or laws, which governed them on that occasion, so afterwards change and alternate the position of the company, and the liability of the shareholders, by restoring the capital to its original amount—the same regulations being observed in the restoration as in the reduction which had been effected, and thus again restoring it to its pristine state.

We regret that we are unable, in our present Number, to give insertion to the report of the directors of the Irish Waste Land Improvement Company, for we believe it is well known we take more than ordinary interest in the prosecution of works having for their object the advancement of the interests of the Sister Isle, whether we regard mining, banking, railway, agricultural, or other pursuits—satisfied, as we are, that, in advancing the prosperity of Ireland, we increase our own. The proceedings of the meeting, however, will be found in another column, and we would, without political or party bias, direct especial attention thereto, for it teaches a lesson to those who are too honestly disposed themselves to believe there is dishonesty in others. It tells a tale which cannot but raise a feeling of indignation in the mind of every Irishman, while it must disgust those who, in England, have so largely contributed, in years past gone, to the reverses which attended the agricultural provinces of Ireland, and which, indeed, may be said to comprehend seven-eighths of that country, when we consider how limited are its manufactures, or other modes of finding employment for its population.

The Irish Waste Land Improvement Company was formed with the object of applying English capital to improvements in Ireland, whereby the capitalist might derive an interest, from the employment of his capital, and, with its dearth in the Sister Isle, afford to the distressed peasantry the means of subsistence, while it gave to the landlord the means of paying his mortgage, rent, and residing in London, Paris, or Rome; such were the objects of the society, or company, and highly praiseworthy were they, while high honour and credit is due to the Right Hon. the Earl of DEVON, for the interest he has ever manifested in its successful issue.

What, then, is the position in which this company is now placed? We will briefly state the points, and leave it to the Irish press to follow up those observations we may make—but which the insertion of other matter, of immediate interest, precludes us from extending—as also to offer an apology, if such seems meet to them, for the disgraceful, if not dishonest, conduct of Ireland's *liberator*, DANIEL O'CONNELL, M.P., who extracts, or exacts, some 12,000*l.* to 15,000*l.* a-year for his support. Will it, we would ask, be believed for a moment, except the evidence was at hand, and conclusive, that DANIEL O'CONNELL, a *director* of the Irish Waste Land Improvement Company, is a defaulter of some 40*l.* or 50*l.*, which he *declines* to pay. Why, surely, he might allow so small a modicum of the "rent"—got from those whose interest and means the object of the institution is to promote—to be paid, and preserve his position, so far as consistency is concerned; but no, he will not pay the amount he is legally bound to do, and the directors, we think with a proper feeling, so far as dignity of position is characterised, cast him aside, eject him from the board of directors, and declare him a defaulter—not only to the funds of the company, but the interests of his country—rather than institute an action against a retired Irish barrister.

Thus much for DANIEL O'CONNELL, "the liberator of all Ireland." Proceed we further, and we find that Mr. FITZSIMON, once, if not now, a member of the Imperial Parliament, and, if we mistake not, a son-in-law of DANIEL O'CONNELL, is also a defaulter—so much, then, for Irish protection, and support of Irish interests. Next come we to Mr. Alderman FARNCOMBE, of the metropolis of Great Britain. This gentleman either went into the speculation as a friend to Ireland, or as a money-getter—we care not which for our argument; for, if the former, the greater the difficulties to overcome, the more zeal should we have expected he would display; if the latter, and foiled in his expectations, then, at least, he should have paid his proportion, ere he withdrew his support; but poor Ireland appears to be a fair subject for London Aldermen—as witness Alderman THOMAS WOOD, and the Talacre "job." Next on the list we have another honourable (?) member, Mr. W. ORMSBY GORE. This gentleman is also a defaulter—*truly*, a friend to Ireland, but one who should be rejected by all climes. And then, again, we find THOMAS LAMIE MURRAY, Esq., concoctor of the National Loan Fund, the National Bank of Ireland, *cum multis aliis*—speculations to others, but sure profit to himself; he also figures in the list of defaulters. If we remember aright, he had something to do with DANIEL O'CONNELL in the formation of the Irish Joint-Stock Bank; and, for his services, although removed from the direction (we are hardly sure about the latter), receives some few hundreds per annum for his arduous duties in forming a joint-stock bank for Ireland. Now, we know he did something for England, in establishing the National Loan Fund, by which he secured himself a birth for some twenty-five years, at a salary, if we mistake not, of 600*l.* to 800*l.* a-year, with a charge upon all the shares issued, amounting to some 10,000*l.* or 20,000*l.*; and yet this man *declines* paying his quota upon the calls made on his shares. It will, doubtless, be remembered that we had occasion to "show him up" on a former occasion, with reference to this company. It is, we once again repeat, the shameless conduct of such men that reflects discredit on joint-stock companies, where principle is sacrificed to self-interest. We may, anon, refer to these worthies; but cannot allow the present opportunity to escape us, without expressing the feeling we entertain of the unprincipled motives which actuate and influence the several parties whose names we have mentioned in the preceding remarks.

IMPROVEMENT IN WORKING THE STEAM-ENGINE.

A discovery, or rather a revival and application of a discovery, of the celebrated James Watt, patented upwards of sixty years ago, in reference to the "expansive action of steam," is announced, which is likely to prove of the greatest importance, not only to the Royal, but to the merchant steam navy of this country. The attention of Mr. HOSEASON, whilst serving as lieutenant on board her Majesty's ship *Cambridge*, was directed to the best means of averting the repeated failures of steam-vessels, of however large power, in reaching their destination, when, in the course of his inquiries, he stumbled upon a patent taken out by James Watt, sixty-two years ago, for applying the expansive power of steam to land engines, and found that "one quarter of a given quantity of steam worked expansively is more than equal to one-half worked in the usual manner." Mr. Watt fortunately left data on which to arrange its adaptation to steam-ships, and Mr. HOSEASON has followed out the discovery with this object, and finds that half the steam of an engine worked expansively, gives within one-eighteenth of the entire velocity, which can be obtained by the employment of the whole power the engine can generate. His plan is, therefore, to increase considerably the horse power of the engines, and then work them at half, and sometimes at quarter, stroke; when he proves to demonstration that if the ship has been accustomed to go eleven miles an hour on full steam, he can reduce the consumption of fuel one-half, and yet maintain a velocity of ten miles an hour; in fact, that a quarter the quantity of steam allowed to expand itself in the cylinder, will maintain a velocity within two-ninths as great as when the whole steam is employed. Upon this principle, the *Great Western*, which carries coal for 4000 miles, at a mean velocity of nine miles an hour, would reach Calcutta with a single coaling, if the steam from the cylinder were cut off at quarter stroke, leaving the pistons to be driven the remainder of the stroke by the expansive action of the steam; for as the quantity of steam generated, is in direct proportion to the fuel consumed, the steam which is prevented from entering the cylinder, will be represented by an equal quantity of fuel.

JOINT-STOCK BANKS.—The following is a list of the various meetings held during the past few days, with the amount of dividend declared by each:—Burton, Uttoxeter, and Staffordshire Union, dividend 10 per cent., and upwards of 1000*l.* to the reserve fund; Stourbridge and Kidderminster, 7*s.* 6*d.* per share, being 10 per cent.; Devon and Cornwall Banking Company, 6 per cent.; Newcastle Joint-Stock, 6 per cent.; Dudley and West Bromwich, 10 per cent., with 4000*l.* to reserve fund; Bilston District Bank, 7 per cent.; Wolverhampton and Staffordshire Banking Company, 10 per cent.; Leicestershire Banking Company, 12 per cent., with a guarantee fund of 32,829*l.*; York Union Bank, 10 per cent., with a guarantee fund of 16,972*l.*; Yorkshire District Banking Company, 3*s.* 9*d.* on the old shares, and 2*s.* 3*d.* on the new; Leeds Banking Company, 6 per cent.; Barnsley Banking Company, 8 per cent., and 600*l.* added to the reserve fund; and the Leeds Commercial Banking Company, 6 per cent. for the half-year, with a most satisfactory report.

THE GAS-METER QUESTION.—This discussion has now assumed so personal a nature, that we are compelled to decline inserting any more articles on the subject, unless confined to mere facts, and duly authenticated by responsible parties; for, where personalities are indulged in, and encouraged, much valuable space must be devoted to a useless purpose, and the necessary exclusion of matter of interest and benefit to our subscribers. It has always been our wish to offer a fair field to all parties, and to encourage the publication of scientific or useful papers, but, at the same time, as far as possible, to prevent all discussions of a personal and irregular tendency.

NEWPORT AND NANTYGLO RAILWAY.—As the period approaches, when the preliminaries for this undertaking must be entered into, and as the prospects brighten, of an effectual carrying out the plan, the enemies of the rail way system, and those of this local one in particular, are throwing out insinuations, in all directions, against the possibility of its ever paying the proprietors, even if completed; a correspondent in the *Monmouthshire Merlin*, writing in anything but a disinterested style (and which savours very much of the waters of the canal), attributes interested motives to the coalowners and ironmasters in the vicinity, as well as the projectors. In what he calls a *favourable view of the matter*, he estimates the cost at 450,000*l.*, instead of 320,000*l.*, the sum originally calculated (and which it is expected will cover every expense), and at only 5 per cent. interest on capital, and taking the working cost at 500*l.* per week, he makes out a loss to the proprietors of 7000*l.* or 8000*l.* per annum. These interested side-blows, will, however, do but little harm, the necessity of the railway, to meet the extending commerce of the district, and the harbour of Newport, is evident, and everything is progressing in the most favourable manner for carrying out the work. Mr. PRICE, of Newport, has published a very neat lithographed map of the intended line which gives an admirable idea of its importance, from showing the numerous iron-works and collieries through which it passes, and by which means of conveyance, their produce must be conveyed to the Newport Docks; he is also about publishing a map of the whole works and collieries of Monmouthshire and Glamorganshire, showing their present means of conveyance to the ports of Newport and Cardiff, by canal, tramroad, &c., &c.

CRYSTALLISED SULPHUR.—(*From a Correspondent.*)—The following simple experiment, for obtaining the most beautiful crystals of sulphur, may not be generally known:—Melt 1 lb., or upwards, of pure sulphur in a pipkin, at a low heat (as, if the sulphur gets too hot, it becomes viscid), take it from the fire as soon as it is liquid; let it stand a few minutes, and a crust will form over the surface; make two small holes at the edge of the crust, one opposite the other, and pour out the liquid from one of them, leaving the crust in its place; let it cool gradually for a few hours, and, on removing the crust, the under surface will be found composed of an innumerable quantity of small but beautiful crystals.

THE EARTH'S ORBIT.—Professor Chevallier, of the Durham University, has given a decided contradiction to a statement of "an American philosopher," to the effect that the inclination of the plane of the equator to that of the ecliptic, was sensibly diminishing. The learned professor says—"I may mention that the very small changes which are well known to take place continually in the inclination of the plane of the equator to that of the ecliptic are periodical, and are confined within definite limits; and that in any portion of the long period required for the completion of the whole cycle of changes, no sensible effect upon the seasons can ever occur." The other statements contained in the account of the "eminent gentleman connected with the Yale College" are also satisfactorily refuted by the learned professor.

ORIGINAL CORRESPONDENCE.

ON THE BETTER VENTILATION OF MINES.

TO THE EDITOR OF THE MINING JOURNAL.

SIR,—The subject of ventilation, as brought forward in your Journal of 28th of January, has induced me to take up my pen on this subject. There are many topics brought forward in that paper to be admired, yet many more must be discarded. 1st. We object to the equality of the propelling and inducing systems in ventilation, for they have never yet been proved equal. "The exhausting system has always been found preferable to the forcing system," says Mr. Buddle; the reason of this is plain, since by the one there are two motive powers, while in the other only one is employed. 2d. It is asserted in that paper, that all the abrupt turnings do not check the air; this is, certainly, contrary to the philosophy of the case, since we know that any fluid, or gas, will run more quickly through a straight than a crooked course. 3d. It is assumed in that paper, that the plan is quite novel, of passing the air through heated surfaces, to assist ventilation; this, also, is wrong, since the hot cylinder is an old invention, and, let me say, much better calculated to facilitate the draught than the heating apparatus of furnaces. Neither the one or the other, however, is altogether *safe*, since Sir H. Davy and others have proved, that at a *white* heat inflammable gases *will* ignite. 4th. In the calculation of quantities, the author has forgot the dilatability of the carbonic acid gas, or he should not have allowed 10° of influence to be lost in expelling that gas, for it is the most expansible of any other gas, and, consequently, the most easily drawn off—at least, in contact with heating surfaces, it will increase the draught more than common air, since, on the expansibility of the air, all draught depends. Please, Sir, accept these remarks as preparatory to a paper on ventilation.

Cwm Amman, Feb. 10. U. THOMPSON.

MINE SETTS.—OUTLINE OF A BILL.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Having endeavoured to show that an Act of Parliament is necessary to give full access to the metals, &c., of this country, I beg to refer to my several letters on the subject, which appeared some time since in your columns; at the same time returning my thanks to your readers for the courtesy with which my suggestions were received. The over-crowded state of your columns has prevented my sending an outline of the proposed statute, which I now furnish, by way of a visible embodiment of the final result of the past, so far as my letters on setts are concerned.

AN ACT

To empower the Judges of Her Majesty's Courts of Queen's Bench and Common Pleas, &c., to make orders for the granting of Mine Setts, and, when necessary, to grant the same.

Whereas, there exist in the United Kingdom of Great Britain and Ireland, &c., divers lodes, streams, veins, and beds of ores, metals, and minerals, coal, slate, lime, sand, clay, marl, and other metals and minerals, the owners whereof are averse to working the same, or making grants thereof to lessees, with the usual reservations; and, whereas, on the expiration of terms, many valuable mines have been shut up and abandoned, in consequence of disputes between lords and adventurers as to the conditions of renewal of setts or grants, to the great injury of the commonwealth; and, whereas, the working and continuance of such mines, &c., would be of great public utility, by affording employment to the people, and increasing the available wealth of the nation.

May it, therefore please your Majesty, that it may be enacted, and be it enacted, &c.—That either of the judges, &c., shall or may—in the absence of any subsisting working sett, bearing date, and executed prior or subsequent to the passing of this Act—on the application of any responsible party or parties, grounded on an affidavit of facts, make an order of court on the owners or lords of the soil, or mineral proprietor (whether Duchy or otherwise), requiring every such owner, or lord, or proprietor, or his agent, within one calendar month from the date of such order, to grant to the applicants—on the customary, or such other terms as may be agreed on—a sett, or grant of liberty to work, mine, and search for ores, &c., in any places, whether waste or arable, not within one hundred yards of any mansion, &c., horizontally, nor within fifty feet immediately underneath any building, and provided the same be not so understood as that there shall not be left sufficient support for the foundations and floors within the same.

And be it further enacted—That, in case of the non-residence, minority, insanity, &c., of the lord or mineral proprietor, in the absence of any agent or guardian, &c., or, in case no amicable arrangement can, after notice, be come to between the parties interested, it shall and may be lawful for either of the judges aforesaid—on further application, after the expiration of one calendar month, or otherwise, as shall be requisite, from the first application—to execute to the applicants a sett or grant for the term of twenty one years, *renewable for ever*, on such conditions as the custom of the country, or the general state of mining knowledge, or geological or scientific discovery, may require; with the usual reservations to or for the benefit, and on behalf, of the owner of the soil, or mineral proprietor. That a copy of every order made shall be advertised in the *London Gazette*, the *Mining Journal*, and in the journals of the county wherein the mine, &c., shall be situate, for three successive weeks prior to the second, or subsequent, application, and, if possible, be served on, or at the house of, every party interested in the soil, or having any claim of right to work or mine therein, so that such persons may, if they think proper, appear, by their counsel or attorney, to oppose the application on the day therein named.

Provided always that, if the owner of the soil shall contemporaneously and *bonâ fide* mine, work, and try the ground in a miner-like manner, to discover and realise the lodes, veins, beds, streams, &c., therein, he shall be at liberty so to do, so long as it shall appear that such working is not with a view merely to defeat the provisions of this act.—Malicious application, if subsequently discovered, to be deemed a felony.—Leaseholders' and tenants' interest (where right to mine not excepted) to be valued in like manner as for ascertaining the proportion of rate under the Tithe Commutation Act; and land and buildings damaged, to be paid for accordingly, by the lord or adventurers.—Land-sale rate may be subpœnaed for discovery of names of owners.—*Query*, as to limits of setts.

Of course a vast number of clauses, and several amendments, will be required, to include the Duchy, &c. The principle maintained throughout the series of letters on this subject is, that no one has a right to imprison a lode of metal. Having now given a general idea of my meaning, and, I trust, proved the practicability of the principle for which I have contended, I leave the matter in abler hands. ALFRED T. J. MARTIN.

Penzance, Feb. 5.

EAST INDIA IRON AND STEEL.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Although not exactly connected with the iron trade, I read, with no little interest, the many valuable communications which are weekly put forth in your valuable Journal. The relative strength of iron made by hot or cold-blast, by anthracite, or by common coal, has been fully discussed, and, most probably, to the satisfaction of all parties; for, after all, the extensive use of the material in machinery is the only true test by which the public is enabled to estimate the value of each particular kind of iron. It appears to me, that as much depends upon the peculiar methods of annealing, hammering, &c., as upon the material—hence the superiority of the Damascus blades over anything produced in this country; and, again, the oxide of iron of India yields a steel equal, it is said, to the Swedish, but wanting the ductility of that which is principally used in this country. I am informed that large quantities of this steel, made by the "Madras Indian Iron and Chrome Company," have recently been imported, and used up at Birmingham, Leeds, and other manufacturing districts, and am, therefore, somewhat surprised that not the least notice has been taken of it by any of your correspondents, or by yourself. It is well known, that iron is exceedingly abundant over Hindostan—that the labour of working it is comparatively trifling—that in the province of Burdwan coal and limestone are equally abundant, and water carriage convenient from all points. Perhaps, some of your numerous readers can favour us with some information connected with the operations of British capitalists in the above and other mining speculations in the East Indies.

London, Feb. 17. A MERCHANT.

ELECTRO MAGNETIC SAW-MILLS.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—I visited, with very high satisfaction and much delight, Mr. Davidson's (of Aberdeen) curious exhibition of electro-magnetic machinery, at the Egyptian Hall, Piccadilly. Among the rest, there is a saw-mill, moved by electro-magnetic force. This, as well as others, he has, for many years, openly exhibited, at Aberdeen, to hundreds, if not to thousands—among these, the professors of the universities there; and Professor Forbes has, some years ago, described them, and drawn public attention to the ingenuity and perseverance of this individual. Judge, then, Sir, of my surprise, when informed, on the occasion referred to, that Mr. Fox Talbot—who, it seems, has taken out a patent for an electro-magnetic saw-mill—had sent, through his solicitors (Messrs. King and Co., *if I remember right*) an interdict, forbidding him from making such, under the pains and penalties incident on an invasion of his patent rights; but graciously condescending to permit Mr. Davidson to exhibit his own invention! The said solicitors charging Mr. Davidson 10*s.* 6*d.* for writing the said letter of interdict. Now, it can be clearly proved that Mr. Davidson publicly exhibited his invention several years before Mr. Fox Talbot ever dreamed about a patent; and that, too, substantiated by the evidence of numbers of scientific individuals! I ask—"Is that the law?"

Feb. 16. J. MURRAY.

[This would form a fair and legitimate question for the consideration of the Patentees' Mutual Protection Society, which we are glad to find progressing, and whose prospectus we hope, on an early day, to insert in our columns.]

MR. GURNEY'S PLAN OF VENTILATION BY STEAM.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Having noticed, with much satisfaction, in the late numbers of the *Mining Journal*, your elaborate notice of the *Report of the South Shields Committee on the Causes and Prevention of Accidents in Coal Mines*, and in which, under the head "Ventilation," I perceive they recommend Mr. Goldsworthy Gurney's high-*pressure* steam plan, I send you a description thereof, which I shall be happy to see inserted in your columns, should you not have a better one to avail yourself of.

Mr. Gurney proposes that a pipe, from a boiler at the *surface*, should be carried about thirty feet down the shaft; from the end of this pipe one or more branches project horizontally, in which are inserted small jets—Mr. Gurney recommends twenty-five, as sufficient. Steam, at high pressure, being admitted to this pipe, regulated by means of a stop-cock, is ejected from the jets with great force, and, causing a rapid rarification of the air in the upper part of the shaft, the heavier atmosphere rushes upwards to supply its place, and thus a rapid current is made to course through the workings. The committee suggested that fixing the steam jets in the shafts used for winding would be impossible, as the large circular baskets, three feet in diameter each, or iron tubs, of nearly the same area, were continually passing up and down; and that it would be more in accordance with usual habits, and create less prejudice, by having them placed in the furnace-drift, devoted entirely to ventilation. Mr. Gurney replied it was necessary to move the whole body of *air* in the shaft, and proposed that the jets should be so placed as to leave an opening for the tubs; but with a valve or door in certain places in the workings, the steam ventilation would have an equally good effect in the furnace-drift, and the committee have recommended it accordingly.

Gateshead, Feb. 14. AN OLD COAL MINER.

MR. SIMS'S IMPROVEMENT IN STEAM ENGINES.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—In your valuable paper of the 28th ultimo, I perceived a most excellent diagram, with description of an improvement on the steam-engine, by Mr. James Sims, of Redruth, Cornwall. As I cannot make out in what manner the saving of fuel is obtained, perhaps that gentleman, or some one of your intelligent correspondents, will be so good, in an early Number, to point this out. It appears to me that the expansive principle of steam intended, is more objectionable than otherwise; upon this point I should feel great pleasure, however, on being corrected.

London, Feb. 9. A YOUNG ENGINEER.

[We cannot doubt but that Mr. Sims will afford the desired explanation, although we considered such to have been rendered by Mr. Sims's letter, inserted, p. 30, and the monthly reports of working of engines, which appear in our columns. We have requested "An Engineer" to compute the advantages, and hope to give the result of his inquiries in an early Number. There can, we believe, be no question but that a great advantage is gained, inasmuch that a 50-inch cylinder exerts fully an increase of 30 per cent. power over the old construction.]

ON THE FORMATION OF MINERAL DEPOSITS.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Your correspondents, "J. T." and Mr. Deakin, need not knock their heads together upon the subject of heaves and dislocations, for, whatever proofs "J. T." may bring forward in support of his theory of dislocations—and no one questions his veracity in this respect—his own facts cannot negative the facts brought forward by Mr. Deakin and other practical miners. We have numerous proofs on record of subterranean disturbance, and consequent dislocation and displacement, but still they are as far as ever from being affirmative of such being the law of dislocation. As an experienced and practical miner, I do think Mr. Deakin is right in the proofs he has given—both are wrong when they attempt to generalise on their own particular facts. If "J. T." has that extensive experience which he takes credit for, he must know that there exists striking deviations, even in admitted dislocations, both in direction and force, of which examples have repeatedly been given in the columns of your Journal; for, as there are several causes which occasion dislocations, apart from any force governed in its direction by the magnetic currents, so must we reasonably suppose that the dislocations vary almost *ad infinitum* in their direction. Many of the main faults are occasioned by the falling away of one portion of the strata from the other—some are produced by the intrusion of matters in solution, percolating from the surface—others are the results of earthquakes, of which upwards of thirty are on record, as having taken place in England within the compass of 300 years. The letter of Mr. Deakin, in last week's Journal, will afford matter for consideration on the subject under notice. AN OBSERVER.

South Wales, Feb. 8.

ON THE ORIGIN OF MINERAL DEPOSITS.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—The discussions on mineral deposits, which have occupied the columns of your late Journals, have, no doubt, been interesting, if not edifying, to a considerable part of your readers; and, where assertions have been made, borne out by sufficient evidence, would, probably, have that tendency to establish the opinions of some. I see one of your correspondents is challenged by Mr. Deakin to prove what he said all scientific men know—viz., that the earth is now progressional, that mines, rocks, earths, mineral beds, and veins, are all continually growing and being created, and, according to such doctrine, must have been so for (200) years; so, for ought we know, the earth at this time might be twice the dimensions it was when its all-wise Creator pronounced it good and perfect. I have thought, when reading such unmeaning assertions as these, how is it that educated and scientific men can bring their brains (upon any other subject except geology) within the grasp of the most common understanding, but, on that, both reason and common-sense appear to be entirely at var ance; as one out of a thousand of opposite facts, there is a certain coal field, well known to myself, one of the oldest now at work in the principality, the management of which has descended from father to son for nearly a century, and in their possession are original sections from the surface to the lowest bed of coal, and though, at certain distances, the different kinds of strata do not exactly agree in thickness, when they have had occasion to sink, or drive, through the same strata, or beds, in the locality of the old section, have then found a perfect coincidence. Such persons, Mr. Editor, must ultimately give way as contemptible fallacies. Your correspondent, "J. H.," wished to know more of the nature of the material of dykes, or faults. By what I have discovered in them, there seems to be a strong resemblance to that series of surrounding strata in which the mineral beds terminate, though in a confused state. I have collected a few specimens of a different nature, but think their properties cannot be correctly ascertained without a chemical process.

Abergavenny, Feb. 15. A SOUTH WALES COLLIER.

ON THE FORMATION OF MINERAL VEINS.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—The correspondence which has lately taken place in your truly valuable Journal, on the above subject, is both amusing and instructive—amusing in that, while giving the most important facts, how tenacious each is of his own theory, and instructive as teaching the interested reader the folly of blending the chaff of opposition with the more sterling grain of facts. Your correspondent, "D'Argent," is a theorist; he speaks of primary rocks, without apparently knowing the character, composition, and qualities of those rocks, which very often differ from each other as widely as coal does from limestone—nay, more, with as little ceremony he gives his own opinions as the re-echo of the opinions of practical men. He tells us he has examined the granite rocks in Cornwall and in Spain, and then the gradual transition into the slaty in both places. Will this practical miner favour us with his analytical examination—with the chemical constituents of the one and the other; and the causes, or supposed causes, of the singular difference of their elementary constituents? the extensive chain of rocks termed the transition series are not unknown to geologists or mineralogists, but they have still to learn how the inseparable barriers formed by Nature are to be removed, and all rocks claim a common origin and nearly common elements. It is true that, at the point of junction, the material of the overlying and underlying beds is often strangely mixed and united, for such must be the case, if both beds, when melting, were in a soft or decomposed state, but where the rock beneath has previously consolidated, the superposition of the upper bed is strikingly apparent. "D'Argent" has, of course, seen the granite of Cornwall in its decomposed and decomposing state; he has also seen schistus in its disintegrated state. What is there, I would ask him, in their physical resemblance, in their components and chemical combinations, to warrant the inferences drawn by him?—I most decidedly say there are none. He says, the crystals are tesselated; resinous, vitreous, I observe, that they are tesselated only in their edges, and are jointed in laying so, being seen close in their various stages of formation, and that, too, in various parts of the world. As well may he say that such is the case with the veins in marble, or those now forming in adhesive clay. "D'Argent," on reference to the back Numbers of your Journal, will find that this subject has been fully entered into. ARISTIDES.

Cornwall, Feb. 9.

ON THE ORIGIN OF MINERAL VEINS.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—It is amusing, and not a little instructive, to observe the variety of opinion expressed by your correspondents on that very important subject, the origin of mineral deposits; and in the contention between science and practical acquirement, the former is evidently the gainer, by every fact elicited from the latter; and it can well afford the patience necessary to wade through the muddy waters by which such facts are surrounded. Still, I do think, your clever practical men ought to confine themselves more immediately to facts coming daily and hourly under their observation; more particularly so, under the present pressure on the columns of your Journal, by original correspondence. Your correspondent, "A Workman," gets quite unmanageable, when asked to diversify the scene, by exhibiting both sides of the picture, and in this he is truly unreasonable, for, if he is a practical man, he must know that no two mineral beds are alike, and that dislocations and other phenomena are equally variable; and, in despite of his diagrams, we have still a just right to doubt their having place, other than in the mind of an anonymous writer. Mr. Deakin, a practical man, opines there are not. Again, Messrs. Deakin and Thompson take up the theoretical part on theological grounds. The word "create" had, perhaps, better have been left out; but its usage is justifiable and proper, for the presence of the Sun creates heat, and thereby causes a substance or being to exist; thus fishes and fowls, as heretofore, are created out of the waters, and animals and vegetables out of the earth. This word was variously used by the Jews, and we are, therefore, fully justified in preferring it, in many instances, to the word *produce*. As your correspondent "Yes" remarked, Mr. Deakin is at full liberty to consider that the world is now as it was in the beginning; but, at the same time, I do lament that men, like this practical miner, should, by the fortuitous chain of events, common even to this enlightened country, be debarred the use and perusal of those scientific works from which alone he will be enabled to abstract a knowledge of the changes continually going on, both upon and beneath the surface of the earth. Changes, by flood, by fire, by earthquakes, are common to all countries; and yet Mr. Deakin, whose knowledge is bounded by his native hills, naively defies a man of science to produce one solitary proof of change. Why, Sir, I have walked, dry shod, over one of the largest river-beds of the earth, have seen deep and navigable streams filled up, the interior of the earth poured out like molten lead, mountains levelled to the plain, lakes disappear, and strata—nay, islands, and vast portions of main continents—form upon the commingled wreck of oceanic organic bodies. Again, from the deposits of mighty rivers, the land encroaches upon the ocean; the sea, to unknown depths, filling up, with the remains of animal and vegetable bodies, and these gradually mineralising into coal, ironstone, and other compounds, familiar to Mr. Deakin. I trust, for the future, Mr. Editor, your practical correspondents will more immediately confine themselves to facts, and leave theories to schoolmen, and works of science, to whom they more rightly belong.

Oxford, Feb. 16. J. S. D.

ARTESIAN WELLS—BRIGHTON.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—It is to be hoped the attempt to sink an Artesian well at Brighton will, ultimately, succeed, notwithstanding the numerous apparently insuperable difficulties that are continually presenting themselves; I believe it to be the first attempt to make an artificial jet of the sort; but (in opposition to a statement in a late Journal) Maltebrun states that they often rise naturally from the bottom of the sea, and in so great abundance that the saltness of the surrounding ocean is materially lessened by them. In the Gulf of Spezzia, in the duchy of Genoa, for instance, there is a powerful jet of this description rising in a liquid column. Again, on the south coast of Cuba, south-west of Barabano (according to another account, in the Bay of Xagua, about thirty miles east of the Jardinillos), two or three nautical miles from the shore, fresh water jets arise through the sea in such force that boats cannot approach them without hazard. In a recent description of Bahrein Island, otherwise Aval, situated in the Persian Gulf, it is stated that the only water with which the inhabitants of the port can be supplied, as well as all that is used on the adjoining Island of Arad, is brought up from the bottom of the sea at the depth of eighteen feet, where there is a spring of good fresh water. It is procured in skins with the top of a jar fitted to the mouth; through this orifice the fresh water rushes into the skin, but, as may be supposed from the method of obtaining it, the water is rather brackish and expensive. With regard to Arad, another account asserts that not even tradition has retained the memory of a spring of fresh water in its environs, which the ancient inhabitants are related to have discovered at the bottom of the sea, and from which they drew water in time of war by a leaden bell and leathern pipe fitted to it. R. B. W.

Lewes, Feb. 14.

MR. WILLIAMS'S REPLY TO MR. BILLINGSLEY—CONTINUED.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—In my last I cited some observations of the learned judges in the recent case of Neilson's hot air patent, and pointed out their direct application to that under consideration, first, as regards, the *principle* of introducing the air to the inflammable gases in a furnace, in a *divided* state, as leading to that mixture with the gases, which is the *sine qua non* of their combustion; and, second, the *mode*, or means, by which such division, or distribution, of the air may be effected. I showed that the courts, while they considered that some practical mode, described in the specification, of carrying the principle into actual effect must be pointed out, yet that "the particular mode" in which it is to be effected is left with the public, and that there is nothing in the decision of the judges which confines the patentee to the "one mode" described by him in his specification. This is the mistake, however, into which Mr. Billingsley and others have fallen—one correspondent even going so far as to say that, because that "one mode," as stated in the specification, described the air as passing through *round* holes, I was, therefore, confined to the use of such, and that any other shaped holes were inadmissible. It appears, in fact, that, overlooking the *principle*, to carry out which was the object of the patent, and that the use of distributors, or apparatus for distributing, separating, or dividing the air on its admission, was only the *mode* by which such principle was embodied, Mr. Billingsley appears to have considered the one class of distributors, named in the specification, as the subject matter of the patent itself; this oversight on his part surprises me, since, having read my *Treatise on Combustion*, he must have perceived that my great object was to urge the necessity for the mixing the air and gas, and the dividing the air, so as to assist in this mixing process, rather than insisting on any particular mode of effecting such division, or any number, size, shape, or situation of the dividing apertures. Mr. Billingsley has paid me the compliment of saying my *Treatise* is faultless, and I beg to express my obligations for his so doing, assuring him that he will have no cause to regret this expression of his approbation, when I assure him that every sheet of the work, as the proofs came from the press, was revised and corrected by my kind friend and early instructor, Dr. Ure—unquestionably one of the ablest and most accurate chemists of this or any other country.

In Neilson's case, Sir J. Campbell, for the defendant, observed—"This is not a patent for a mode of heating the air before it enters the furnace, but a mode of applying it." To which Lord Abinger replied—"No: it is that the air shall be *heated*—the particular *mode* in which it is to be heated I leave to others; my discovery is, that it shall be heated by passing through a heating process before it comes to the furnace." So I say; my patent is, that the air shall be *divided*—the particular *mode* in which it is to be divided I leave to others; my discovery is, that it shall be divided by passing through a dividing process before it comes to the furnace. Again, Lord Abinger says—"A particular form, or shape, or modification, is no part of the patent, but it is, that the air shall pass through a heating [dividing] process before it enters the furnace." The force of words, or reasoning, cannot be more explicit.—(See *Webster's Report on Letters Patent*, part 6.)

It is a matter of indifference what we call the apparatus, whether it be a distributor plate, rack, trellis, or rose; it is not the thing, but the process, it effects, which is the object of the patent. Neither is the situation or number of the dividing apertures limited; any more than their size or shape; or shape or the material of which they are composed; provided they effect the purpose of dividing the air, and thus enabling it to present a larger surface for contact with the gas. That is the point to be considered—the specification clearly enunciates it—and to that I would beg the attention of Mr. Billingsley and others, for that goes at once to the true chemical principle of combustion, and the mode of embodying such principle. I, therefore, repeat explicitly, that what I insist on is this—and to this the attention of our engineers should be directed—namely, that the principle on which air should be admitted to the gaseous matter of coals in a furnace, consists in causing it to enter in such a divided state (and the greater the number of divisions, jets, streams, or films, the better), that a due admixture with the gases shall take place, and with a rapidity sufficient to counteract the current with which those gases are hurried into the flues by force of the draught. The question of combustion or non-combustion turning on this single fact, that, if this admixture (atomic mixture, technically termed "diffusion") be not effected before the gas and air pass into the cooling region of the flues, their subsequent mixture in those flues will be *too late*, and they will then pass away uncombined with the oxygen of the air—that is, unconsumed. Combustion of the gas, in fact, cannot take place, even in a single atom, until first it is brought in contact with its equivalent of oxygen; and, secondly, unless that contact has taken place *before* the required high temperature be lost. As to the process of heating the air, there never was a greater delusion, were it even practicable to heat the required quantity, but which it is not, without the aid of a blast. Heating the air, when we have to deal with a solid combustible, as coke, has its advantages, but heating the air which has to come in contact with a gaseous combustible, is not only opposed to chemical principles but to practice; and the advocates of the hot air principle, among the "smoke consumers," have found it out.

Mr. B. says—"Mr. Williams entirely repudiates the admission of air in front, and passing over the incandescent fuel on the bars." This is a misapprehension, and, if he will consider the principle of the patent, and the chemical reasoning by which it is supported, he will find he is mistaken. Indeed, if he will look to the hundreds of furnaces erected on my principle, he will find a large portion of air admitted in front, whenever it was practicable; and in many of those erected years ago, the air enters in front, with even a whistling rapidity and noise. The fact is, such admission in front is only objectionable when it is in excess, and violates the primary law—that no greater number of atoms of air should be admitted at any one locality, or in any one stream or jet, than can combine with the atoms of gas with which they first come into contact—unless, indeed, time can be obtained for effecting complete diffusion, which, however, is incompatible with the hurried state of things in a furnace. But I will explain this further. If we bring, for instance, ten cubic feet of air and one cubic foot of gas together, in suitable vessels, and allow sufficient time for entire diffusion, so that each atom of the gas will be in contact with its equivalent ten volumes of air (or four atoms, which is the same thing), complete and entire combustion will ensue on the mixture being ignited. If, however, we bring such ten cubic feet of air and one of gas together in a furnace, and without any dividing process which would aid in the mixing, as sufficient time cannot be obtained, a small portion only of such gas will be consumed—viz., such atoms alone as may, in the short time allowed, have obtained such contact respectively—the remainder, both of the air and the gas, passing away unmixed, uncombined, and, of course, unconsumed. In this case the gas will pass away, not as smoke, but as gas, of a light colour, and often nearly invisible; in fact, the gas passes off without having been even *decomposed*—the first stage of the process towards combustion. Thus we shall find, practically, that the extent of combustion, and the nature of the products, be they smoke or gas, will depend on the quantity of air admitted, the mode of its admission, the extent of its intermixture, and the temperature of the gas. This process of admitting air to the gases in a furnace, therefore, is one of the most difficult in management, and liable to the greatest fluctuations and uncertainty, unless we proceed strictly in accordance with the chemical and natural laws which govern these gaseous bodies. So complex is this process, that most people are led into the error of supposing that they have "consumed the smoke," when, in fact, they have merely avoided the appearance of the black cloud, by having sent off the gas unconsumed, or converted into another gas, carbonic oxide, which is always invisible.

Now, it is in strict conformity with chemical facts that I repudiate the gases (not the air, as Mr. B. observes) "passing over the incandescent fuel on the bars." This was one of the errors of Watt, in his first suggestion of introducing the coal in front, and, as modern inventors say, "having it first coked, and then pushed onwards, by which the gas from each fresh charge, passing over such incandescent fuel, is thereby consumed." This, I say, is a fatal error; it is chemically wrong, and practically deceptive. We cannot here go into that question, but I may observe, that, when the body of fuel on the bars is in an incandescent state, any coal gas (carburetted hydrogen) that may then be allowed to pass over it (and which should always be avoided), so far from being consumed by such incandescent fuel, is only the more certain of passing away unconsumed, unless the due quantity of air be supplied beyond the bridge, and in the proper way. I omitted mentioning that Mr. Billingsley says he has had his plan in successful operation more than two years. I beg to assure him that I have had a similar application of my patent in successful operation above three years, although they do not seem to have come under Mr. Billingsley's observation.

Mr. Billingsley concludes by stating it to be your province, Mr. Editor, to congratulate the public on finding a *cheap* and *unpatented* plan. I do not concur in this; but, as to his charges against your "fostering the claims of grasping patentees, with their useless plans," I do think, in this manufacturing country, and surrounded, as that gentleman must be, by numerous ingenious men, to whom the country are so deeply indebted for the exercise (too often unrequited) of their skill and ingenuity, this sweeping censure on patentees is as ill-placed as it is unmerited.

Liverpool, Feb. 15. C. W. WILLIAMS.

[We sincerely hope that, by the formation of the society, referred to in another column, that patentees will be protected—as are them much, and it would, indeed, be hard if talent and capital were not alike protected.]

THE LEAD TRADE.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—I have read, with great pleasure, in your valuable Journal, the satisfactory letter of your Reeth correspondent on the subject, more particularly of lead, and the mines thereof. I do not, however, consider that 18*l.* per ton is found a remunerative price for either this country, Spain, or America. Lead ore assaying for lead only 7·14 ox. out of 10 oz., the standard ought to bring about 12*l.* 12*s.* per ton, and common pig lead, inclusive of one-eighth or one tenth of slag, 20*l.* per ton; at this price the large mines of the Lead Company, Mr. Beaumont, and others, will pay in this country, and encourage the adventurers regularly to open fresh ground; but when the price is less, the produce will gradually decrease, as it is now doing; witness the stopping of the White Grit Mines, in Shropshire, where, though the adventurers have raised lead, and sold to the extent of 160,000*l.*, besides capital expended to the tune of 60,000*l.* more, no profit has been made, and the mines are given up, the engines and machinery being now advertised for sale at a tremendous sacrifice. The neighbouring mines, with only one exception, are in no better position, showing a loss of some 60,000*l.*, but are carried on by the princely means of what was formerly termed the "Leviathan Lead Company;" nor is this any partial statement, many other mines are in a similar position, and Sir Robert Peel, in his Tariff, has certainly inflicted a blow on the adventurous miner, which has destroyed his property, and almost his energies for adventure. If changes, such as those recently made, are to be admitted, without the smallest reason, and on a representation to the Board of Trade at the time, showing its injurious effects, with a city Member at its head, you will not be allowed to have a statement of the weekly ticketing at Holywell until the leviathan company shall have achieved the monopoly they have so long aimed at, through their enlightened knight; though, if the cost could be showed of this almost numberless company of proprietors, to the trade generally, by which the great Roman Catholic smelter has been driven out of the trade, and also the most economic smelter, who raises the only good coal in his neighbourhood to aid him, and is a most worthy magistrate, retiring upon his means—I say, if this profit and loss account were only shown, the trade would, indeed, view the managing knight as a perfect Don Quixote—I do not say what they would think of his supporters. The miner in Wales now obtains a fair price for their ores, only through the free trading of two respectable firms in the lead trade of this town. A LEAD MINES ART MERCHANT.

Bristol, February 20, Feb. 14.

RELATIVE PROPERTIES OF HOT AND COLD-BLAST IRON.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—Mr. C. Wright, of Pant, in his letter of the 4th of January, gives an account of the pig-iron sent from the Plaskynaston Works, and which Mr. Fairbairn experimented upon, which, you will at once see, I could not be aware of, or I should not have alluded to it; in doing so, however, if Mr. Wright will refer to your Journal of the 6th of August last, he will see that I only state the Plaskynaston Iron-Works as being in the same mineral field as those of Ponkey, from which I inferred they used the same coal and ironstone, but I am not aware of ever having said it was the same.

"Another Original Subscriber," under date of the 11th of January, is very angry with me for presuming to answer the various anonymous letters in the only way such trash should be answered, and calls it disgorging my spite; after which he himself goes on to assert falsehoods so great as to require no comment here. Our neighbours will be more impartial judges than ourselves; and his remarks have little, very little, to do with the present question.

Mr. J. Hawthorn's letter, of the 18th ult., is of a very different class, and shall have my best attention; in doing so, Sir, I cannot but regret that the names of other parties should be brought into this question, who probably have little to do with it, as regards cold and hot blast iron, and yet so Mr. Hawthorn begins his letter; it is, therefore, for me to remind both him and yourself that the aqueduct at Stanley Ferry was not brought into this discussion by myself, but by one who signed himself "Alpha," and whose real name you doubtless know. What I have to do with it is, simply, that having been informed, long before this question was agitated, by an engineer of the very first eminence, that the aqueduct at Stanley Ferry contained much more than the usual quantity of broken flanges, and plates, evidently so broken, at the time of putting up, I was not a little surprised at finding it mentioned by "Alpha" as a piece of work to be shown in proof of the strength and fitness of hot-blast iron for such purpose. I therefore sent a steady and intelligent man to examine it, who found at least eighteen fractures in the colonnade, on one side, but was not able to get on the other side; this, Sir, you will see was more than enough to confirm the report I had heard of it; but, being aware that some unavoidable accident had occurred during the time of putting the work together, I thought it probable these numerous fractures might have been caused by that accident, until I read Mr. Hawthorn's letter, which clearly shows that it took place before either of the two colonnades or the tank were in their places.

I can assure Mr. Hawthorn he may, with perfect safety, leave any thing to me, so far as my being out of temper has to do with it; for I am, in truth, not ill-tempered, nay, not in the least degree, with him; and as to all the other paid scribblers in this matter, they cannot know the extent of amusement afforded to myself and friends when witnessing their shifty misrepresentations to bolster up the cause they have so unwittingly espoused. Mr. Hawthorn having expressed a candid feeling towards me, will probably excuse my recommending to him, for his future private information, to revisit the aqueduct at Stanley Ferry—when his eyes are in their most impartial state of vision—and, having been told it, as a notorious fact, that about one third part of the iron work contains at least eighteen fractures, it is more than probable he may find a somewhat similar proportion of fractures in the other two thirds; and he should, by all means, have with him, and read carefully, Stephen Kish's letter, of the 16th of Dec. last, to be found in your Journal soon after that date, and he will there see other reasons for those superabundant fractures, besides the weakness of hot-blast iron; it will point out the cause of many of them—namely, the very great difference in the degree of contraction when cooling, &c., &c., in castings made of hot blast iron. I have not the pleasure of knowing who Mr. Kish is—I wish I had; but your readers, Sir, will see he is, at the least, a highly practical man, in whose mind these selfish and very delicate experiments have almost brought experimenting of any kind into contempt, except such as are carried on in our workshops, on the large scale, and which will very soon be such only that either cold or hot-blast users need attend to.

I have, again and again, referred to that part of my letter of Jan. 2, wherein I recommend "Alpha" to visit the Leeds Iron-Works, without being able to discover the slightest reason for any one supposing it could be inferred that those castings were made at Milton; and I can only assure you, Sir, that I had no intention such should be inferred when I wrote that letter. It is really too bad that I cannot go from home to collect evidence for the support of the cause I have undertaken without such accusations as these being brought against me. In what a dreadful state the consciences of some of the Milton people must be, to suppose, for a moment, that the misdeeds of other hot-blast iron makers cannot be alluded to, without their taking it to heart. With respect to the very numerous breakings of hammer-shafts I mentioned, they took place in the month of November, or December—and not in *July*, as Mr. Hawthorn states—but I really cannot just now say in what year; I can, however, assure him it was a matter of so much notoriety in the neighbourhood at the time, and that, too, so long before the discussion on this subject was thought of, that nothing now said, under the present too evident feeling at the Milton Iron-Works, can in any way alter my impression on that point; and I much regret, for Mr. Hawthorn's own sake, he did not stop at that point; but he goes on to say, "I have made a good many steam and other engines at these works, of hot-blast iron, and, in no one instance, have I ever increased the proportions over those of cold-blast iron, but, in many instances, to the contrary." Here, however, Mr. Hawthorn does, prudently, stop; for he does not say that none of the engines so made had broken; that would not have done, so soon after the twenty-horse engine he made (and which is drawing coal so very near to us), has been repeatedly broken down—and the first time it did so, in consequence of the crank's head breaking off, the greater part of the whole engine was either broken, or much injured—although it is worked by a very steady man, who has been at the same employment from his youth.

Mr. Hawthorn concludes his letter by saying I erected the rolling-mill at Milton of cold-blast iron, and that, in 1838, both the crank and fly wheel axles broke. I wish he had stated the weight and length of each, and also the weight of the fly-wheel; because, with that information, together with a knowledge that the said mill had been at work for fifteen years, your iron making readers would, at least, have known how to estimate such a made mill.

Mr. Joseph Parker's letter, of Jan. 16—being of the same date as Mr. Hawthorn's, and coming from the same works—claims a little of my attention, only because it comes from thence; for, from the style of its commencement, it is but too clear that, if not from the same pen as some of the letters from anonymous writers, it is, at least, out of a very similar head; and you, Sir, will see that some of the results Mr. Parker requests are to be found in my original paper, and that, although I have so very often been condemned for making a partial use of Mr. Fairbairn's experiments, yet, I trust I gave, as we went along, an ample reason why I did so—a part of which reason was, that it was the relative power of different irons to *sustain impact* which the public had mainly to do with. But Mr. Parker, in the last stage of this much too long correspondence, not only does the same thing, but culls out that portion for his *purpose* with which the public have nothing, or very little, to do—namely, their power to sustain a *very, very, slowly pressure*. In the next portion of his letter it will be clear to you, Sir, that Mr. Parker has either not given himself the trouble to understand my paper, in your Journal of the 6th of August last, or, what is quite as probable, his impudence is, as usual, combined with thorough ignorance—at least, on the subject he has now undertaken. Mr. Parker next traverses his ground of argument in so clear and parallel a direction with Mr. Hawthorn, the natural conclusion is that, being set to copy the letter, he thought he could make one himself, and did so the same day; he will, therefore, find my answer in the former part of this letter.

Mr. Parker, however, goes on to say that I have made heavy charges against eminent engineers. I can assure Mr. Parker he need not trouble himself on that subject; I have had many thanks, both verbal and written, from very eminent engineers, and, I take it, what is good for one engineer will be so for another; and Mr. Parker may further rest assured that, however far he may succeed in loading my shoulders with eminent engineers and contractor's managers, I shall not wince much, even if he himself takes his seat there with them. Nor do I think traders from hot blast iron-makers, for large contracts, are in any danger of being excluded. All that has hitherto been wanting in that respect is, that it must in future be fully and clearly understood that they are such, in order that the parties having to pay for them may know what they are paying for; and the amount will very shortly be brought down to its proper level, for which the public will probably think, notwithstanding all Mr. Parker has said, or can say, they are somewhat indebted to Polytechnic, and other societies of a similar kind; and, therefore, to those who write for, and make speeches at, those societies—notwithstanding the sneers so liberally bestowed on them by some of the hot blast iron-makers, or, what is more probable, by some of their empty headed offensive friends.

Mr. Parker ends his letter with something which is to have great effect, when he *declares to be false* what I said about the rapid breaking of the forge-shafts; but, I would remind him, that happened before he knew the Milton Works, and when I generally walked four times a day past those works, on which account I needed no spy to inform me of what was going on there; and if he befriended to apply the term "*magnificent spy*" to either of the men I sent to examine the aqueduct, or bridge, after reading "Alpha's" subject letter, Mr. Parker must excuse me when I tell him that both the men so employed were in every way as respectable as himself, and much more so in one very important particular—namely, that I never, during the many years I have known them, can call to mind their, in any one instance, having undertaken a task they were not fully competent to execute. But, probably, my ability to form a correct opinion on such a subject may be doubted, and that thought—with the recollection that some of your very constant correspondents have called me, in addition to other ugly names, *a self-styled civil engineer*, together with the reflection crossing my mind, on looking at the diagram in Mr. Hawthorn's letter, showing the form of the arches carrying the tank of "Alpha's" aqueduct over the Calder river—reminds me, Sir, that I have a duty yet left to perform, both for the men in question and myself; in doing so, I will, however, occupy as little of your Journal as possible.

You, Sir, will have some reason to doubt what I say, when I tell you that, while the Milton people are so carefully examining the arches in question, the arch, in form and principle, is entirely my own, drawn under my directions at Milton, for the Hamel bridge, at Leeds, and subdivided for the one originally intended, by the engineer employed; all of which took place, with Mr. Graham's full knowledge, fourteen years ago. By which it seems that during that period no better form of iron arch has been found than the one invented by a "*self-styled civil engineer*," in 1824, the drawings for which I hold, or, probably, I might not have ventured upon this claim. O, ye men of Milton, why has your master knowingly let you run your heads against so very hard a post as this. A few observations more on that subject, Sir, and I shall cease to trouble you further upon it. When I bought the Milton Iron-Works they consisted only of two blast furnaces, and, in about seven years after, were completed under my own directions, with the foundries, forges, rolling-mills, engine shops, &c., &c., the character of which may, in some measure, be estimated by the fact that, on their completion, a person, now holding his head very high in the profession of civil engineering, had received unfavourable and unflattering an account of the new work, as to be induced to demand so far as to bring a draftsman with him, on a Sunday, to take sketches of the works, and their various newly-erected machinery. Do you, Sir, think it possible that those could have been the production of a mere "*self-styled engineer*?"

In conclusion, allow me to say to Mr. *Joseph Parker*, I think he and his staff would be much better employed in reading what has already been written on this subject, than in writing more upon it; and all their heads put together will not find that I have said *great* iron cannot be made at Milton, even with hot blast; all I have said, pointed, and do yet contend, for is, that, however good they sometimes make it, if made with equal attention by cold blast in the smelting process, it would be a great deal better. Have I ever denied that very bad hot blast may be, and often is, made with cold blast?—this, however, only shows that the public safety demands that every possible caution should be taken to ensure its being made good. Mr. Parker, I think, has his staff under very indifferent command; for, it seems to me, one or other of them are continually either making strikes on the first he is unable to throw them, or else they are very apt to run against each others' noses. I think, before Mr. Parker takes the field again, he should put them under better discipline. I have now only to say, Sir, you will, ere this, have perceived that I am not a man to be bullied out of my argument; and, on the other hand, should any civil engineer, or others, think themselves harshly alluded to by me, in the heat of this discussion, I shall, with pleasure, enter into any explanations with them, before a gentleman, to be fixed upon, and, if by him required, make the needful apology for my error.

HENRY HARPER.

Burcharygate Hall, near Rotherham, February 13.

LIGHTNING CONDUCTORS.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—In describing my lightning conductor, I might have added an extraordinary proof of its efficiency. Shortly after its erection, or attachment to St. Paul's Church, Huddersfield (the loftiest spire, and reared on the loftiest site), the lightning fell on that town, and destroyed the White Lion Inn there, and did considerable damage to two other buildings. These formed a triangle with the church, as a central point, and without the sphere of influence, in relation to the conductor. The church was a new erection, and this circumstance, combined with its exposed station, amply confirms the completeness of the protection; this occurred sixteen years ago; St. Peter's Church, as well as the White Lion Inn, in that town, were soon afterwards supplied with this conductor. The tendency of recent erections, surmounted by spires, &c., to similar visitations, is sufficiently proved in two churches at Derby and Doncaster, and in that of Kirkstall, near Leeds. The damage in the last case amounted to nearly 500*l.*, and the architect subsequently attached my conductor to that spire. The damage accruing from the lateral explosion has been sufficiently eliminated by Messrs. Sturgeon, Martyn Roberts, and others, but supposing the question involved here, to be merely problematical, would it be prudent or wise to risk such mighty consequences on such an issue? The facility with which electricity is dispensed to vicinal bodies, from points, edges, or acute angles, is not the feeblest objection I have to strips of metal inlaid in masts of ships at sea. J. MURRAY.

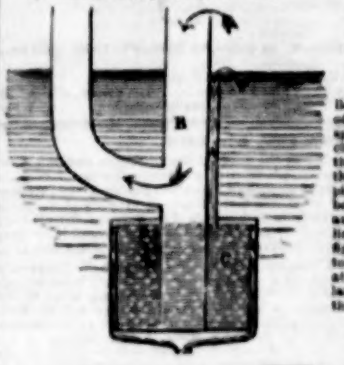
Lichfield, Feb. 15.

GAS-METER QUESTION—THE HYDRAULIC JOINT.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—May I request the favour of your assistance to set the public right as to the invention of the hydraulic joint, for the purpose of maintaining the proper registering line of water in gas-meters (wet). I find in No. 1017 of the *Mechanics' Magazine*, page 93, this very modest statement made by Mr. Tweed—"The improved meter, which he (Mr. T.) had now brought under the attention of the meeting, was not an invention of yesterday, for it had been patented more than eighteen months;" this was in explanation of the improvements introduced by Mr. Botten, and particularly referred to his patent syphon, and was certainly the truth, but not the whole truth, for while engaged for the European Gas Company in France, so far back as 1836, I made meters, and fitted them with the hydraulic joint (of which the annexed diagram is a representation), and, in 1838, supplied the London and other gas companies with meters, in which I also introduced the improvement; I think, in common honesty, Mr. Tweed, who, I doubt not, is well acquainted with the foregoing facts, might have admitted that Mr. Botten was not the inventor. I cannot leave the subject, without expressing my strong conviction that if Mr. Jones was not an agent in the hands of Mr. Flowers, that the *Mechanics' Magazine* was in the hands of Mr. Botten, and for the sole purpose of introducing Mr. Botten's meter to the public, and in a manner detrimental to the interest of practical meter makers. WILLIAM WOOD.

4, *Hollen-street, Soho, Feb.* 16.



DESCRIPTION OF DIAGRAM.

The figure represents the hydraulic joint, as applied to the syphon of a water meter; B represents the spout, or gas inlet, from the front chamber to the measuring wheel of the meter. The water is poured into the meter until it overflows the small pipe marked A, falling into the chamber C, which, when full, overflows and passes between the two outer lines, shown on either side of the figure, and is allowed from thence to flow by the small opening shown at the bottom of the drawing. The larger arrows mark the course of the gas—the smaller, the water.

THE GAS-METER QUESTION.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—As your valuable Journal is one of the very few which has distinguished itself, and served the public, by reporting the proceedings of the fallacies of gas-meters at the Adelaide Gallery, may I request, as an early labourer in the *exposé*, that you will do me the favour to insert the following letter, which has been rejected by the Editor of the *Mechanics' Magazine*; though, as you will observe, I have convicted him in three or four cases of gross misrepresentation on the side of the gas companies. I only desire to put myself right with the public.

5, *New Bridge-street, Blackfriars.* HENRY FLOWER.

[ADVERTISEMENT]

TO THE EDITOR OF THE MECHANICS' MAGAZINE.

Sir,—Having convicted you in one "mistake," or "*pecuniarily*"—whichever you or the partizan, Mr. *Joseph Home*, who would swear black was white, choose to call it—let me correct three or four more of your "impartialities."

And, first, with the report of the experiments at the Adelaide Gallery, which you say, "in the newspapers, is too palpably defective and erroneous to be relied on," and which induced you, on Tuesday, *January 31*, "to make arrangements for obtaining the report of the proceedings." [How we appius swim!] dare is your immaculate report. [Mr. Sharpe's speech is not your report, I am quite sure, to do not pretend to it, or the lion's skin shall be stripped off.]

"First experiment: With a too light meter (*water*), it registered 1½ per cent. against the consumer."—*Mechanics' Magazine*, p. 93.

"Second experiment: Half a plot of water drawn off; that effected a change in the registration of ¼ per cent. against the gas suppliers."—*Ibid.* p. 93.

"Third experiment: second half-plot of water drawn off; registered 1½ per cent. more against the gas suppliers."—*Ibid.* p. 93.

Now, the truth is, the first half-plot of water that was drawn off reduced the 1½ per centage which was against the consumer 1¼ per cent., leaving it still ¼ per cent. fast; and, when the second half-plot of water was withdrawn, the meter then went correctly. These experiments were made with a meter which it was allowed on all hands was manufactured by one of the most respectable and able makers in London, but to praise its honesty would be just as correct as to commend a thief who had plundered your pocket, and who, in consideration of your not punishing him, had handed you back your purse. Violence had to be used to extract the plot of water from it, which made it honest, and out, as you state, "1¼ per cent. more (less) against the companies." This is special reporting, with a witness. "We never (say you) have had the slightest communication with the gas companies." "Fudge!" indeed, or way conceal the truth. This meter had *passed the ordeal of* one of the companies, and was ¼ per cent. fast (!) on the level line of theory, on that tranquil line of deceit. You say that, and "either in my first or second sentence, do I take any notice of Botten's *improved meters*, of which great numbers are also in use, and which I now acknowledge would be as accurate as it is possible for water meters to be, if they were not obliged to be under the *sinister influence* of the companies," for which "if," you add, "there is no foundation, except in my own imagination." "This is the meter (you continue) alluded to by Mr. Flower, as having been found by the other Engineers to the tune, an honest within 2 per cent." Behind quaint experiments, of which the reader will find an account in another part of our present Number, have we shown it to be honest within 4 per cent." No such thing. The meter, as being honest within 4 per cent., was not made by Mr. Botten. It was one of the "*crack*" experimental ones, and Mr. Botten's "improved meter, honest within 4 per cent." was a brass upon new ones, and had never been under the sinister influence of the companies, unless, perhaps, to be rejected by some of them. It had not had the honour of being "judged."

But let this question be experimented in a proper way. You, who ought to have thrown over it the gravity of a court of justice, call names, and pun. Let me be serious. The experiment made by Mr Atkin and Atkins, correct, Sir, that the companies had different standards of measure was denied at the meetings which the meter makers attended. I beg here, as I did there, to corroborate that gentleman's assertion, and I wish to do it as emphatically as I can, and I avow that I have seen different standards of measure for the gas-meter to suit the ideas of what the companies call measurement; and is not the correctness, too, of this, borne out by the facts detailed in your own pages? Ist. We see, in the first experiment that you give (p. 93), that with a too light water meter, which had passed the ordeal of the companies, it registered 1½ per cent. against the consumer. 2d. In the sixth experiment (p. 94), with Botten's improved water meter which, however, had not passed the ordeal of the companies, that it registered correctly within 4 per cent. against the consumer, while a No. 1 dry meter of Bentley registered 3½ per cent. against the suppliers of gas. This test experiment, I am informed by Mr. Atkin, is not to be depended on, as the meter, during the day, was strained, by being blown into; but let the experiments tended to show that the meters licensed by the different companies varied in measure more or less, on the level line of water.

The "new truth in physical science, of gases not being expanded by heat, but condensed by cold," if discovered, is by your two reporters, not mine. I merely say, that "*the perfect means of the dry meter is not affected by the temperature of the weather*—*lowering, of course, that the situation be analogous to the water meter. Water enters not into its motive apparatus*; therefore, there can be no evaporation, or freezing, of it, as is sometimes the case with the water meter, and I believe it will not be denied, that condensation in the water meter is chiefly occasioned by the water which is in the meter. I have never observed any condensable products in the dry meter, excepting a thin film of naphtha, which is rather conservative in its properties than otherwise. But your assertion is just as probable as the contract you give, in which you state, that "Mr. Flower now alleges, that in the 6 and second editions of the pamphlet I '*said a word to said regarding the principle of the water meter*.' We begin to suspect shrewdly (you continue) that Mr. Flower does not, at times, know what he says. In the preface to his *second edition*, are these words—'If any one will patiently study the nature of the gas meter, as here faithfully described, the fact that the *principle* of it is objectionable, will be so obvious, that, perhaps, the silence (of the companies) ought not to be wondered at.'" Objecting to the principle of a thing is *rather* different, I opine, to regarding it as radically false. To the other shadows that you have raised you may battle with as you please. You have not impugned a single fact in my pamphlet. Your charges

"Coming like shadows, soon so depart."

I trust that the reader does me the justice to conclude that I have been actuated by no other motive than a desire for the truth—I dissected a meter obtaining 8*l.* I examined other meters; I do not mean to say that I proved every meter in London, but I repeat that "it was not without due investigation that my statements were put forth" (you may carp at the words as much as you please), and the critics, or fraud, call it which you will, which they were committing, and I measured the meters just as I found them, without reference to the level line of water, taking them precisely as they were registering, and in all cases leaving them perfectly intact, that the loss to the consumer varied from 8 to 20 per cent.

To you, the defender of the water meters, and to the water meter makers themselves, who are now so busy in *improving perfection*, let the 1017th number of the *Mechanics' Magazine* be a commentary—that "Mr. Clegg, the same ingenious and skilful engineer who invented the original water meter (your own words, p. 66, in this volume of the *Mechanics' Magazine*), has now presented to the world a *dry gas-meter*, which was described in the aforesaid Number. But let me not be supposed to throw the least taunt upon Mr. Clegg. He has never endeavoured to bolster up a faulty system. What is Mr. Clegg's opinion of the water meter, in his recently published work? "The imperfections under which the meters labour," says Mr. Clegg, "are, rapid decay from exposure to the influence of the water, the variation of the water line, freezing, and the pressure required to work them. The former of these have, in some degree, been remedied by Mr. Henning, in what he calls his "patent protector gas-meter," to what extent remains yet to be proved, but the last disadvantage can never be removed, owing to the mechanical defect in this which it is impossible, in its present form, to surmount.

THE AUTHOR OF THE PAMPHLET OF "THE UNFAIRNESS OF GAS-METERS."

5, *New Bridge street, Blackfriars, Feb. 7.*

P.S.—One word more. I am ready to meet you on any question of fact, and you, as a "judge," should eschew anything but facts in a question of this kind. You say—"We should have thought it difficult to find a man, woman, or child, in all London, who had not, by the dog days of 1841, become familiar with the words, 'Defries' gas meter;' and when, therefore, Mr. Henry Flower, of 5, New Bridge-street, Blackfriars, tells us it was not till after he had written his pamphlet against the water meter (June, 1842) that 'he heard, *for the first time*, of the dry meter;' we feel irresistibly compelled to say, with the laconic Burchell, 'Fudge!'" After Mr. Flower had thus heard of the dry meter, he says—"I with some trouble found out the inventor of the best dry system, Mr. Defries"—*trouble* to find out one of the best advertised men in all London, to whose *locus in quo* Pigot or Kelly could have in an instant directed him! but no 'trouble' whatever in discovering Mr. Defries to be the 'inventor of *the best dry system*,' *that* he knew before ever seeing him, or testing his meter! Again, we say, 'Fudge!'" Facts all, I reiterate, and my published name, I have no doubt, will be rather a better authority on any question of fact than an anonymous doubter of it. I first heard of dry gas meters in April or May, 1841, by reading an advertisement in the *Times*, which I entered in my pocket-book, that I might attend the sale. Here is the extract:—"May 5, 1841: This day, 200 dry gas meters, from three to forty lights, by Mr. Wheeler, at 39, Londonwall-street." Accident, however, prevented my going. I made subsequent inquiries, and was informed that they were imperfect, and that very few had been sold. Following up my inquiries, I was directed to C. H. Stedman, Esq., the secretary of the Dry-Meter Company, 16, Bront-street-buildings. Upon my proceeding there, I found the door of the office locked, and I was told that the company was defunct. I asked the porter of the house if he knew anything of the manufacturers of dry meters?—"He had heard of Mr. Defries." Not possessing "Pigot or Kelly," I turned to the only Directory I had in my office, Robson for 1841. No Mr. Defries was given there as a "meter maker," but I found, under the general head, "H. Defries, gas fitter, 4, Paddington-street, Paddington." I sent, or called, there, and found that Mr. Defries had gone away, and it was only by seeing one of his advertisements in the papers that I ascertained his *locus in quo*, 67, St. Martin's-lane. I think I have proved that I *had* trouble in finding out this meter maker, and that I was not very much out when I pronounced Mr. Defries' system the "best," which, in fact, it appeared to me the only one existing.

ON THE MANAGEMENT OF SCRIP MINING COMPANIES.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—As a distant shareholder, paying my first visit to the county of Cornwall, it appears to me very extraordinary that I can elicit from the respective agents of the "scrip concerns" in which I am interested, little or no satisfactory information as regards who and what are their town directors; and I begin to fall into the opinion that I am one of many who are similarly situated, and that we derive an injury, rather than a benefit, by the constitution of such needless bodies as they appear to be; besides which, I regret to notice, that I invariably find that the expense entailed by such London boards exceeds that of the whole legitimate agency upon the mine! We need not wonder, then, my brother scrip-holders, that our concerns are not among the flourishing, or those paying dividends.

Truro, Feb. 9. CANONIST.

DURHAM COUNTY COAL COMPANY.

TO THE EDITOR OF THE MINING JOURNAL.

Sir,—I suppose I must consider the signature, J. Gibson, to the letter in your last paper, an error of the press, and that the signature really is that of Mr. Thomas Cummings Gibson, to whom alone my observations of mine are applicable. If this gentleman had contented himself with simply denying that he was implicated in the formation of the Northern Mining Company, I should have let it pass, and Mr. G. should have had the benefit of his denial, with all those who were content to consider his own assertion conclusive on the subject. Having no unkindly feeling against Mr. Gibson, and rather regretting his conduct had been such as, in the opinion of the proprietors, to incapacitate him from interfering in the affairs of the Durham County Coal Company, it was no affair of mine if parties chose to overlook prominent facts. But when Mr. G. goes on to add, "I am much mistaken if 'Viator' is not himself fully aware that his statement is grossly and *entirely untrue*," he compels me to make a reply. So far from being fully, or at all, aware of what Mr. Gibson so politely states, I believe my original statement to be fully and completely true. I am not the associate or acquaintance of the A's or B's, and so Mr. G. assumes, too readily, that I can know nothing about the matter. He forgets, however, that the Durham County Coal Company were, in some degree, unpleasantly cognisant of the formation of the Northern Mining Company, which latter company commenced business by the purchase of a sub lease of the Norwood Isabella pit, and 200 acres of coal, part of the Gordon Royalty, to lease to the Durham County Coal Company. This purchase was subsequently much canvassed. And in whose names did the Northern Mining Company make that purchase? Why, in the names of Mr. T. C. Gibson, and four other directors of that company; and Mr. Gibson has stated that, if his name had not been in the agreement, the Durham County Coal Company would never have let the other company have that property. So, here is Mr. Gibson (a director) procuring for them, by his influence, the colliery on which that company set to work, and taking the agreement for it in his own name. But this is not all. Mr. Gibson was the original fitter of the Northern Mining Company; and when that company, taking cautions of the exposure of the frauds connected with the formation of the Durham County Coal Company, expelled the delinquent A's and B's from the direction, they also took the flags from Mr. Gibson; a pretty plain proof what opinion the shareholders of that company had on the matter. For his deprivation of this fittage, Mr. Gibson is loud and incessant (at public meetings and elsewhere) in his complaints against the directors of that company; alleging that he had given thousands for the fittage, and ought not to have been deprived of it. The alleged amount I will not venture to name, for it seems to increase wherever it is mentioned; perhaps, by the addition of interest. Suffice it to say, Mr. Gibson speaks of it as a pretty high figure in thousands; and, when he explains the meaning of this payment for the fittage, it is not a direct payment, but that he has been implicated to that amount, by discounts and otherwise, for the company, on their first outfit. Now, Sir, we have a gentleman procuring the colliery on which that company starts—a director of the company, who has not thought it inconsistent with his duty, as such, to procure to himself a valuable fittage agreement, by advances, to set the company a-going, and yet denying that he is implicated in the formation of the company. Let Mr. Gibson reconcile such inconsistencies, if he can; but, until he does so, I must beg leave to retain my own opinion on the subject. It was this fittage agreement with the Northern Mining Company which caused his inconsistency, in first stimulating, and then trying to escape, inquiry into the frauds connected with the first formation of the Durham County Coal Company. As a large proprietor in the latter company, he was very willing to share in any sum that could be recovered back from the original sellers of the collieries; but when he found such inquiries were stirring up the other company, and endangering his fittage agreement, it was another matter; the interests of the Durham County Coal Company were overlooked; and he attempted to try both, but with no other result than losing the confidence of the proprietors of the latter company, and being himself removed by them from a seat in the directors. If Mr. Gibson can set himself right in the matter, I shall be glad; for the situation of the Durham County Coal Company is such, as to render it desirable that all personalities and private feuds between its members should cease, and that all should co-operate together to promote its future welfare. The next meeting will take place during a most unprecedented depression of the coal trade, and with orders to arrange, as to some of the collieries, of no important nature; and I trust the time of the meeting, instead of being occupied by idle bickerings as to what is past, and without remedy, will be employed in putting matters on a more profitable footing for the future.

[*Our correspondent is correct in his supposition as to the cause of the error occurring to the original letter, we find it was on error of the press; it should have been "T. C. Gibson;" but, in the present, as in many other cases, signatures are given so unintelligibly, that errors will sometimes occur.*]

MEETINGS OF SCIENTIFIC BODIES.
IN THE ENSUING WEEK.

Society.	Place of Meeting.	Day.	Hour.
Statistical	4, St. Martin's-place	Monday	3 P.M.
British Architects	16, Grosvenor-street	Monday	8 P.M.
Medical	Bolt-court, Fleet-street	Monday	8 P.M.
Linnæan	Soho-square	Tuesday	8 P.M.
Horticultural	21, Regent-street	Tuesday	3 P.M.
Civil Engineers	25, Great George-street	Tuesday	8½ P.M.
London Electrical	Adelaide-street	Tuesday	8 P.M.
Chemical	Society of Arts, Adelphi	Tuesday	8 P.M.
Society of Arts	Adelphi	Wednesday	7½ P.M.
Geological	Somerset House	Wednesday	8 P.M.
Medico Botanical	32, Sackville-street	Wednesday	8 P.M.
Pharmaceutical	17, Bloomsbury-square	Wednesday	8½ P.M.
Royal	Somerset House	Thursday	8½ P.M.
Antiquaries	Somerset House	Thursday	8 P.M.
Rl. Society of Literature	St. Martin's-place	Thursday	3 P.M.
Numismatic Society	Somerset House	Thursday	7 P.M.
Royal Institution	Albemarle-street	Friday	8½ P.M.
Royal Asiatic	14, Grafton-street	Saturday	2 P.M.
Royal Botanical	Regent's-park	Saturday	4 P.M.
Westminster Medical	Exeter Hall	Saturday	8 P.M.
Mathematical	Crispin-street, Spitalfields	Saturday	8 P.M.

PUBLIC COMPANIES.

MEETINGS.

Company	Place	Date	Hour
Hull and Selby Railway	Town Hall, Hull	Feb. 18	12.
Birmingham Water Works Co.	Birmingham	20	11.
Sheffield New Gas Company	Sheffield	20	12.
Hungerford Suspension Bridge	9, Villiers-street, Strand	20	2.
Liverpool Gas-Light Company	Dale-street, Liverpool	21	12.
Arigna Iron and Coal Company	9, Liverpool street	21	1.
Taff Vale Railway	Angel Inn, Cardiff	21	1.
General Steam Navigation Co.	69, Lombard-street	21	2.
Maryport and Carlisle Railway	Aspatria	22	12.
Hope Assurance Company	London Coffee-house	22	1.
Durham County Coal Company	Sun Inn, Darlington	23	12.
West Wheal Jewel Mining Ass'n.	21, Threadneedle-street	23	[illegible]
North Midland Railway	Station, Leeds	24	12.
Yarmouth and Norwich Railway	Royal Hotel, Norwich	24	1.
London & South-Western Railway	Nine Elms, Vauxhall	25	1.
Hayle Railway	Office, London-wall	25	1.
Consolidated Copper Mines of Cobre	26, Austinfriars	27	1.
Thames Haven Dock and Railway	7, St. Mildred's court	28	1.
Eastern Counties Railway	Station, Shoreditch	28	1.
London and Blackwall Railway	London Tavern	28	12-1.
London and Westminster Bank	Bank, Lothbury	March 1	1.
Bristol and Exeter Railway	White Lion Hotel	2	12.
Birm. and Derby Junction Railway	Waterloo Rooms, Birmingham	2	11.
Manchester and Leeds Railway	Oldham st. Station, Manchester	3	12.
Alliance Gas Company	60, Finsbury-circus	6	2.

CALLS.

Llanelly Railway and Dock Co. 2½l. per share . March 20 . Cooke, Biddulph, & Co.

DIVIDENDS.

Tamar Silver lead Mining Co. . . 5 per cent. . . . . . Offices . . . . . . Feb. 17.

CURRENT PRICES OF STOCKS AND SHARES.

Much satisfaction is expressed in the Stock Market, at the intimation which has been given, that it is not the intention of Government to offer any measure, during the present session of Parliament, interfering in any way with either the Bank charter or the present system of private or joint stock banks; a reprieve, however, is not an acquittal, and there is no doubt a searching inquiry will be entered into with respect to the whole of the present system of banking. Bank Stock has considerably advanced, and the funds generally have, during the week, steadily improved.

STOCK EXCHANGE, Saturday morning, Twelve o'clock.

Consols Money, 95 ⅛	Dutch, 2½ per Cent., 54¾ ⅛
Ditto Account, 95 ⅛	Ditto, 5 per Cent., 102¾ 3
New 3½ per Cents., 101⅛ ⅞	Portuguese, 5 per Cent., 34¾ 9¼
Reduced 3 per Cents., 95⅞ ⅛	Ditto, 5 per Cent., —
Reduced 3½ per Cents., 102⅛ ⅜	Russian, 5 per Cent., 115⅛ 16½
Long Annuities, 12⅞ 15-16	Spanish, Actives, 5 per Cent., 19¾ ⅛
Bank Stock, 178 9	Ditto, 3 per Cent., 29⅛ ⅞
Exchequer Bills, 63 65 pm.	Chili, 6 per Cent., 78 82
Belgian Bonds, 5 per Cent., 103 4	Columbian, 6 per Cent., 23¼ ⅞
Brazil, 5 per Cent., 76 7	Mexican, 5 per Cent., 30¼ 1
Danish, 3 per Cent., 85 6	Peru, 17⅛ 18⅛

PROMISSORY NOTES AND BULLION.—An account of the average aggregate amount of promissory notes, payable to bearer on demand, which have been in circulation in the United Kingdom, distinguishing those circulated by the Bank of England, by private banks, and by joint-stock banks, in England and Wales, by the banks in Scotland, by the Bank of Ireland, and by all other banks in Ireland; and of the average amount of bullion in the Bank of England, during the four weeks ending the 4th day of February, 1843:—ENGLAND: the Bank of England, 21,[illegible]l.; private banks, [illegible]l.; joint-stock banks, 2,[illegible]l.—SCOTLAND: chartered private, and joint-stock banks, 2,[illegible]l.—IRELAND: Bank of Ireland, [illegible]; private and joint-stock banks, [illegible]l.—Total, [illegible]. Bullion in the Bank of England, [illegible]. HENRY L. WICKHAM.

Stamps and Taxes, Feb. 17.

[From our own correspondents.]

LATEST PRICES OF IRISH STOCKS.—[illegible]

LEEDS, THURSDAY.—The business in the share market has been rather more extensive than for the last few weeks. [illegible] S. S. WATSON & CO.

HULL, THURSDAY.—There has been rather more done this week, and at better prices. [illegible]

BRISTOL, FRIDAY.—Our market is exceedingly buoyant, and, from the favourable report of the Great Western Railway meeting, [illegible]

EDINBURGH, THURSDAY.—Edinburgh and Glasgow Railway, [illegible]

GLASGOW, THURSDAY.—[illegible]

SUNDERLAND, THURSDAY.—[illegible]

BIRMINGHAM, THURSDAY.—London and Birmingham Railway, [illegible]

SALE OF BLACK TIN,
By Ticket, on the 16th of February, at Penzance.

Mines.	Tons.	Price.	Amount.	Purchasers.
Wheal Mary	3	£38 5 0	£114 15 0	L.C. & W. Daubuz.
ditto	3	38 5 0	114 15 0	Bolitho and Co.
ditto	3	38 5 0	114 15 0	Williams and Co.
ditto	7	32 5 0	225 15 0	L.C. & W. Daubuz.
ditto	6	30 5 0	181 10 0	—

Total tons, 22.—Amount, £751 10 0.

SALE OF COPPER ORES IN CORNWALL.

NO SALE on Thursday last, the 16th inst.

Copper ores for sale on Thursday next, at Farquharson's Hotel, Truro.—Mines and parcels—Tresavean 3[illegible]; Fowey Consols 2[illegible]; Trethellan 204; West Caradon 208; Holmbush 204; Par Consols 193; Wheal Providence 121; Wheal Gorland 112; West Wheal Jewel 97; Charlestown Un. Mines 65; Harvey's Ore 60; Penstruthal 47; Francis's Ore 34; Wheal Trigan 3[illegible]; Cliff Downs 29; Great Wheal Charlotte 16; Wheal Unity Wood 14; Wheal Harmony 12.—Total 2429 tons.

Copper ores for sale on Thursday week at Pearce's Hotel, Truro.—Mines and Parcels.—United Mines 1204; South Caradon 4[illegible]; Hallenbeagle 401; Fowey Consols 315; Treleigh Consols 190; North Downs 190; Tresavean 122; Tregothnan Consols 66; Wh. Mosser 26; Killewerris 5.—Total 2[illegible] tons.

SALE OF COPPER ORES AT SWANSEA.

Copper ores for sale February 22.—Chili 167, ditto 82, ditto [illegible], ditto 31, ditto 29, ditto [illegible], ditto [illegible], ditto 9[illegible], ditto 7[illegible], ditto 2[illegible]—Cobre 162, ditto 78, ditto 74, ditto 53, ditto 41, ditto 35—Cuba 76, ditto 64, ditto 30, ditto 17, ditto 5, ditto 44—Chanceral 1[illegible]—Phœnix 37—Ballymurtagh 35—Ballygahan 6—South Molton 3, ditto 2—Mexican 1.—Total, [illegible] tons.

WORK PERFORMED BY CORNISH ENGINES.

The number of pumping-engines reported for the month of Jan., is 43—the quantity of coals consumed being 2070 tons, lifting, in the aggregate, 30,000,000 tons of water 10 fathoms high—the average duty of the whole is, therefore, 56,000,000 lbs. lifted 1 foot high by the consumption of 1 bushel of coal.—The boiler at Trewavas has been uncovered; they are leaky at Old Engine, East Wheal Rose, and at the Old Engine, Polberou.—The usual particulars will be published in our next.

LATEST CURRENT PRICES OF METALS.
LONDON, FEBRUARY 17, 1843.

	£ s. d.		£ s. d.
SPELTER—Foreign, ton . 0 0 to	21 0 0	COPPER—Old . . . per lb.	0 0 9½
„ For delivery . . 22 0 0 to	23 0 0	„ Cake p. ton 0 0 0 to	88 0 0
ZINC—English sheet . . 0 0 0	30 0 0	„ For. cake . . 0 0 0 to	—
QUICKSILVER . . . per lb.	0 4 0	„ „ tile . . 0 0 0 to	85 0 0
IRON—English bar, &c. . p. ton	5 5 0	TIN—English, blocks, &c. cwt.	3 3 0
„ Nail rods . . 0 0 0	6 5 0	„ „ bars . . 0 0 0	3 6 0
„ Hoops . . 7 10 0	7 15 0	„ Foreign, Banca . . 0 0 0	3 6 0
„ Sheets . . 0 0 0	8 15 0	„ „ Straits . . 3 0 0	3 1 0
„ Cargo in Wales . . 0 0 0	4 10 0	„ „ Peruvian 0 0 0	2 10 0
„ Pig, No. 1, Wales 0 0 0	3 12 6	Tin plates, No. IC. p. box 1 5 6	1 8 6
„ No. 1, Clyde 0 0 0	2 7 6	„ „ No. IX. . . 1 11 6	1 14 6
„ For., Swedish . . 11 0 0	11 5 0	„ wasters 2s. p. box less	
„ Russian, CCND . . .	16 10 0	LEAD—Sheet milled . . p. ton	18 10 0
„ „ PSI . . .	15 0 0	„ Shot, patent . . .	22 0 0
„ „ Gourieff . . .	15 10 0	„ Red . . .	22 0 0
„ „ Archangel . . .	—	„ White . . .	24 0 0
STEEL—Swedish keg . . p. ton	18 0 0	PIG-LEAD—English . . 0 0 0	17 10 0
„ „ Fagged . . 0 0	—	„ Spanish . . 0 0 0	17 5 0
COPPER—English sheathing . . lb.	0 0 9½	„ American . . 0 0 0	17 0 0

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the week ending Thursday last:—

Silver coin to Macao	94,000	ounces.
„ Rotterdam	10,000	„
Silver bars to Rotterdam	13,000	„
Gold coin to Mauritius	204	„
„ New York	3,875	„
Coin to Mauritius	£ 5,000	

Gold and silver coin shipped at Dover, for Calais, in January:—Gold, 3,870 oz.; silver, 307,700 oz.

CURRENT PRICE OF GOLD AND SILVER.

Foreign Gold in Bars . . per oz.	£3 17 9	New Dollars . . . per oz.	£0 4 9¾
„ „ Portugal pieces	3 17 5	Silver in Bars (standard)	0 4 11⅛

COAL MARKET, LONDON.

MONDAY.—Prices of coals per ton at the close of the market:—Buddle's West Hartley 15 6—Carr's ditto 15 6—Davidson's ditto 15 9—Hasting's ditto 15 6—Nelson's ditto 15 3—Old Tanfield 15—Ord's Redheugh 14—South Pontop 15 6—Townley 15—West Wylam 15 9—Wylam 15 9—Wall's End Delaval 15—Hedley 17 6—Hilda 17—Killingworth 17 6—Northumberland 16 6—Riddell's 17 6—Belmont 19 6—Hetton 19 3—Lambton 20 to 20 3—Morrison 17 6—Russel's Hetton 20—Whitwell 18 3—Cassop 20—Kelloe 20 to 20 3—Durham 18—Seymour Tees 18—Tees 19 6—Ships arrived 4.

WEDNESDAY.—Buddle's West Hartley 15 6—Chester Main 15 9—Davidson's West Hartley 15 9—Hasting's Hartley 15 6—Holywell Main 16—Old Tanfield 15—Ord's Redheugh 14—Tanfield Moor 17 9—West Wylam 15 9—Wylam 15 3—Wall's End Delaval 16—Hedley 17 6—Hilda 17—Bradyll's Hetton 20 6—Haswell 20—Hetton 20 to 20 3—Lambton 20—Morrison 17 9—Stewart's 20—Whitwell 18 9—Caradoc 20 3—Adelaide 19 6—Clarence Hetton 15—Cowndon Tees 17 6—Evenwood 15 6—South Durham 19—Seymour Tees 19—Tees 19 9—Tees Hetton 15 6—West Hetton 15—Hartley 15 6—Howard's West Hartley Netherton 15 9—Sidney's Hartley 15 6.

FRIDAY.—Adair's Main 15—Carr's Hartley 16—Chester Main 15 6—Davison's West Hartley 16—Dean's Primrose 14 6—Old Tanfield 15—Ord's Redheugh 14—Tanfield Moor 17 6—Townley 15—West Hartley 16—West Wylam 15 6—Wall's End Gosforth 16—Hilda 17—Newmarch 16 6—Riddell's 17 9—Wharncliffe 19—Belmont 19 6—Bradyll's Hetton 20 to 20 3—Hetton 20 to 20 3—Lambton 19 9—Morrison 17—Pemberton 19 3—Stewart's 17 6—Caradoc 20—Hough Hall 19—Adelaide 19 6—Cowndon Tees 17 6—Evenwood 15 6—St. Helen's Tees 17 6—Seymour Tees 15 9—Tees 19 9—West Hetton 15 9—Sidney's Hartley 16 6.—Ships arrived, 107.

STATISTICS OF THE COAL TRADE.

The official "account of coal, culm, and cinders, imported into the port of London during the year 1842, and sold at the Coal Market, specifying the quantities of each particular sort, as per fitter's certificate," is now lying before us, and we propose to supply an abstract of the several tables to our readers.

First, the total monthly imports:—

Months.	Ships.	Tons.	Months.	Ships.	Tons.
January	436	95,176	July	793	165,667
February	903	232,205	August	1134	301,491
March	890	252,404	September	940	231,405
April	670	130,783	October	965	254,110
May	910	213,500	November	913	206,292
June	700	142,322	December	1068	294,397
			Total	[illegible]	2,723,000

Our next table will show from what sources these supplies of coal were received by the metropolis of the empire:—

Sources.	Ships.	Tons.	Sources.	Ships.	Tons.
Newcastle	1364	350,277	Yorkshire	165	32,512
Ditto Wall's End	1020	314,013	Sundry places	6	430
Sunderland	13	3,100	Small coal:—		
Ditto Wall's End	3433	714,264	Braydon Main	1	433
Stockton	10	3,133	Lease's Main	1	182
Ditto Wall's End	2049	532,165	South Tanfield	1	314
Blyth	490	100,224	Whitfield	1	113
Scotch	201	13,004	W. K. Cassop	1	182
Welsh	[illegible]	79,[illegible]			
			Total coal	[illegible]	2,7[illegible]
			Culm	[illegible]	1,[illegible]
			Cinders	[illegible]	5,[illegible]
			Total	[illegible]	2,7[illegible]

Annexed to the "account" of imports in 1842, is a statement of the imports of the last eleven years; which we copy, as follows:—

[illegible]

These figures are important, as showing the benefit which has arisen to the coal trade [illegible]

THE LONDON GAZETTE—BANKRUPTS.

TUESDAY.—[illegible]

FRIDAY.—[illegible]

PRICES OF MINING SHARES.

Under the head "Foreign Mines" will be found a report from the Imperial Brazilian, of rather a more favourable nature than the last two or three arrivals. The prospects of several English mines are extremely favourable, and shares generally are looking up—especially those of the Bedford United, Botallack, Holmbush, Tincroft, and West Wheal Jewel. Among our correspondence on this subject is a note from "A Subscriber," respecting last week's quotation of Cobre shares, and our observations in that Journal will apply here—the quotations, when altered in our list, are from actual transactions, or at prices for which shares have been offered. Our Penzance correspondent will see we have quoted from his information, which we have ascertained to be the price in London. We are anxious at all times to be as correct as possible in our share list; but, while we are greatly obliged to our readers and correspondents on this subject, and shall always be happy to receive their communications, we beg to say we must use some discretion, and compare their information with that obtained in our usual course.

BRITISH MINES.

Shares.	Company.	Paid.	Price
500	Anglesey	5	—
4,000	Bedford	1⅛	3¼
100	Botallack	175	600
20,000	British Iron	70	—
8,000	Blaenavon	30	—
120	Brewer	—	120
70	Budnick	—	20
1,000	Carn Brea	15	150
5,000	Con. Tretoil Mining Ass.	4	4
2,000	Cornubian Lead Co.	2	2¼
512	Cook's Kitchen	—	30
112	Charlestown	—	200
128	Cregg Brawse	40	—
128	Cosheen	15	75
10,000	Durham County Coal Co.	37	9
128	East Pool	—	350
100	Great Consols	97	600
10,000	Hibernian	12½	1½
1,000	Holmbush	14	42
2,000	Isle of Sark (Guernsey)	11	6
80	Levant	—	450
10,000	Mining Co. of Ireland	7	13¼
128	Mostyn Mines	100	—
70	North Roskear	—	300
3,000	Polberou Consols	10	—
10,000	Rhymney Iron	50	—
128	South Caradon	—	300
900	South Towan	10	4
64	South Wheal Basset	—	500
57	Spearn Moor	70	100
135	Tregullan	—	15
4,000	Treleigh Consols	5	1⅛
6,000	Tamar Consols	3	4¼
6,000	Tincroft	7	11
128	Trewavas	—	110

BRITISH MINES—continued.

Shares.	Company.	Paid.	Price
120	Treviskey and Barrier	—	260
96	Tresavean	—	1100
120	Trethellan	—	240
4,000	United Hills	5	4
6,000	Wicklow Copper	5	1¼
3,845	West Wheal Jewel	10	11
120	West Trethellan	75	30
53	Wheal Vor	300	—
1,000	West Caebery	—	½ ¾

FOREIGN MINES.

Shares.	Company.	Paid.	Price
5,000	Alten Mining Company	13¼	2
10,000	Anglo Mexican Co.	100	14
3,374	Do. Subscription	25	2¼ ¾
2,000	Bolanos	150	4¼
	Ditto Scrip	15	7
10,000	Brazilian Imperial	21	9½
10,000	Bolivar	20	4
10,000	Ditto Scrip	10	2
10,000	Cata Branca—Brazilian Company	4¼	—
12,000	Cobre Copper Company	40	24 25
8,500	Colombian Co. regis.	55	2
10,000	Copiapo Mining Co.	13½	9¾
20,000	General Mining Assn.	20	4
5,351	Mexican Company	[illegible]	1
12,000	Mexcaloa and Cocoos	25	4¼
14,[illegible]	Real del Monte, regis.	42½	1½
	Do. unregistered	—	2¼
	Ditto Loan Notes	150	60
7,000	Royal Santiago	10	22
11,000	St. John d'el Rey	15	2¼
30,000	United Mexican	40	1¼ ⅜
	Black Scrip, addl. capital	5	1¼
	Red New Scrip	1⅛	3

RAILWAY SHARE LIST AND TRAFFIC RETURNS.

Several Railway meetings have taken place during the week; those of the most important nature being the Great Western, the Cheltenham and Great Western Union, and the Midland Counties. The principle feature in the two former is the question of the entire disposal of the Cheltenham line to the Great Western directors, instead of leaving it, as at first proposed. In the latter, the important subject of the policy of a large reduction in the number of servants and the most valuable of those retained having their salaries materially reduced, with the report of the committee of inquiry thereon, formed the theme of discussion at the meeting.

Line.	Entire Lgth.	Now Open.	Present actual cost.	Pd. on Share.	Val. of Share.	Last week's Returns.
Arbroath and Forfar Railway	15	15	£ 116,706	25	22	—
Birmingham & Derby Junc.	48¼	48¼	1,113,481	100	40½	1027 11 5
Birmingham and Gloucester	55	55	1,440,650	100	47¾	1447 14 6
Brandling Junction	25	25	454,923	50	—	495 7 9
Chester and Birkenhead	14¼	14¼	530,424	50	30	329 12 9
Dublin and Kingstown	6	6	340,392	100	27¼	498 3 6
Dundee and Arbroath	16¾	16¾	141,532	25	25	170 2 3
Eastern Counties*	126	17¼	2,161,034	25	9¾	790 13 7
Edinburgh and Glasgow	46	46	1,385,677	50	46	1432 17 4
Glasgow and Ayr	51	40	886,445	50	40	793 5 11
Glasgow and Paisley Joint	22¼	22¼	730,298	25	25	601 13 9
Gd. Junc. & Chester & Crewe	115¾	115¾	2,518,535	100	19[illegible]	3009 15 11
Great North of England	74	45	1,291,670	100	6[illegible]	1[illegible] 9 4
Great Western	118¼	118¼	6,340,623	65	80¾	10156 8 6
Hayle	18	18	125,[illegible]	100	—	—
Hull and Selby	31	31	651,974	50	35	815 9 4
Lancaster & Preston Junc.	20¼	20¼	435,549	47	27¼	—
Liverpool and Manchester	31	31	1,515,255	100	192	3456 14 7
London and Birmingham	112¾	112¾	5,922,811	100	206	13671 4 6
London and Blackwall	3¾	3¾	1,141,331	16¾	5	512 13 9
London and Brighton	50	50	2,180,645	50	35¾	2394 17 4
London and Croydon	10¼	10¼	619,748	13¾	9¾	191 3 9
London and Greenwich	3¾	3¾	1,019,035	17¾	4¼	675 7 11
London and South Western	92¾	92¾	7,365,311	38¼	5[illegible]	4005 12 10¾
Manchester, Bolton, & Bury	10	10	777,335	[illegible]	36	555 12 4
Manchester & Birmingham	40	31	1,702,351	40	26	2166 13 9
Manchester and Leeds	50	50	2,535,[illegible]	70	71¾	3428 5 10
Midland Counties	57	57	1,410,[illegible]	100	64¾	3197 10 10¾
Newcastle and Carlisle	61	61	750,000	100	9[illegible]	—
Newcastle and N. Shields	7	7	232,077	46	44	374 19 3
Northern and Eastern†	32¼	32¼	358,913	45	35¼	1019 8 8
North Midland	72¾	72¾	2,920,027	100	75¼	3327 16 8
North Union‡	22	22	540,000	75	75¼	910 8 5
Preston and Wyre	19	19	270,000	50	36	203 9 11
Sheffield and Manchester	40	11	251,327	82¼	32¼	266 16 3
South Eastern	67	64	1,073,468	50	22¾	1343 11 11
Taff Vale	30	30	339,723	100	—	—
Ulster	25	24	720,743	25	—	448 13 5
York and North Midland	27	27	436,300	50	90	1394 1 3

* Including Northern and Eastern Railway toll. † Rent and toll to Eastern Counties (about 150l. per week) included in the returns. ‡ The Liverpool and Manchester toll is deducted.

JOINT-STOCK BANKS.

Meetings of Joint Stock Banks have, as usual at this season of the year, taken place in various parts of the kingdom; and, upon the whole, the different reports and statements are of a most satisfactory nature, and evidence that this description of property surpasses almost every other for firmness and safety for investment. In another column we have given a list of those companies, the result of whose meetings have reached us, with the dividends declared, as the regular nature of the proceedings renders a detailed account quite unnecessary, the transactions at the meetings being merely those for which they were convened—declaring dividends, and voting thanks to, and confidence in, directors and managers.

Shares.	Company.	Paid.	Price	Shares.	Company.	Paid.	Price
15,000	Australasia	40	30½	30,000	Liverpool Borough	10	13¾
20,000	Birmingham	10	18½ 19	25,000	Ditto Bank of	22¾	30
20,000	British N. American	40	41¼	12,000	Ditto Banking Co.	10	8¼
10,000	Cheltnm. & Gloucesh.	5	6	50,000	Ditto Commercial	10	17
100,000	Commercial of Eng.	5	—	2,000	Ditto Royal	200	60¾
1,000	Commerc. of London	200	175	100,000	Manch. & Liver. Dis.	15	19¾
20,000	Colonial	25	16¼	100,000	Manchester	10	—¾
20,000	East of England	10	7¼	20,000	Manchester & Salford	10	19
10,000	Gloucestershire	10	29¾	20,000	National of Ireland	17¼	14¾
4,000	Ionian	25	24	10,000	Natl. Provl. England	35	34¼
10,000	Leeds Banking Co.	15	19	60,000	North & South Wales	10	4¾
20,000	Leeds & West Riding	6¼	10	20,000	Provincial of Ireland	25	42¾
20,000	London & Westminst.	20	23	20,000	South Lancashire	7¼	6¼
60,000	London Joint-Stock	10	12¾	20,000	W. of Eng. & S. Waless	12¾	17
20,000	London and County	10	9	20,000	Union of Australia	25	31¾
10,000	Liverpool Albion	25	19¼	60,000	Union of London	10	9¼

MISCELLANEOUS.

The Irish Waste Land Improvement Association held their half-yearly meeting on Thursday. The report of the directors appeared to give much satisfaction to the shareholders present. The tenantry are increasing, and the land is improving in proportion to that increase, although many holders of shares have proved defaulters, among whom is Daniel O'Connell, M.P., the last man—if public professions are to be taken for honest feelings—who should be so distinguished, when the breeding famines and fat-hunts in the wide-wasted objects of this excellent and philanthropic society. [illegible]

Shares.	Company.	Paid.	Price	Shares.	Company.	Paid.	Price
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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